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ABSTRACT

This document provides historical research from the earliest French experiences on the upper North American peninsula through today. Approximately 50 maps have been provided outlining the evolution of information that has been collected by those who sought to explore the region. Most of these explorers were trading company employees who were hired as scientists to map out the best trade routes across this massive land. Later mapping expeditions were carried out by the government. Over time inventions such as the printing machine and better transportation allowed more information to be collected which produced better quality maps. These higher quality maps played a significant role in the way Canada was settled. The maps are presented in five sections: (1) The West before Exploration and Settlement, Maps 1-6; (2) Exploration through the Arctic, Maps 7-14; (3) Exploration and Settlement by Sea, Maps 15-31; (4) Exploration Overland, Maps 32-44; and (5) The Settlement Period, Maps 45-50. (JAG)

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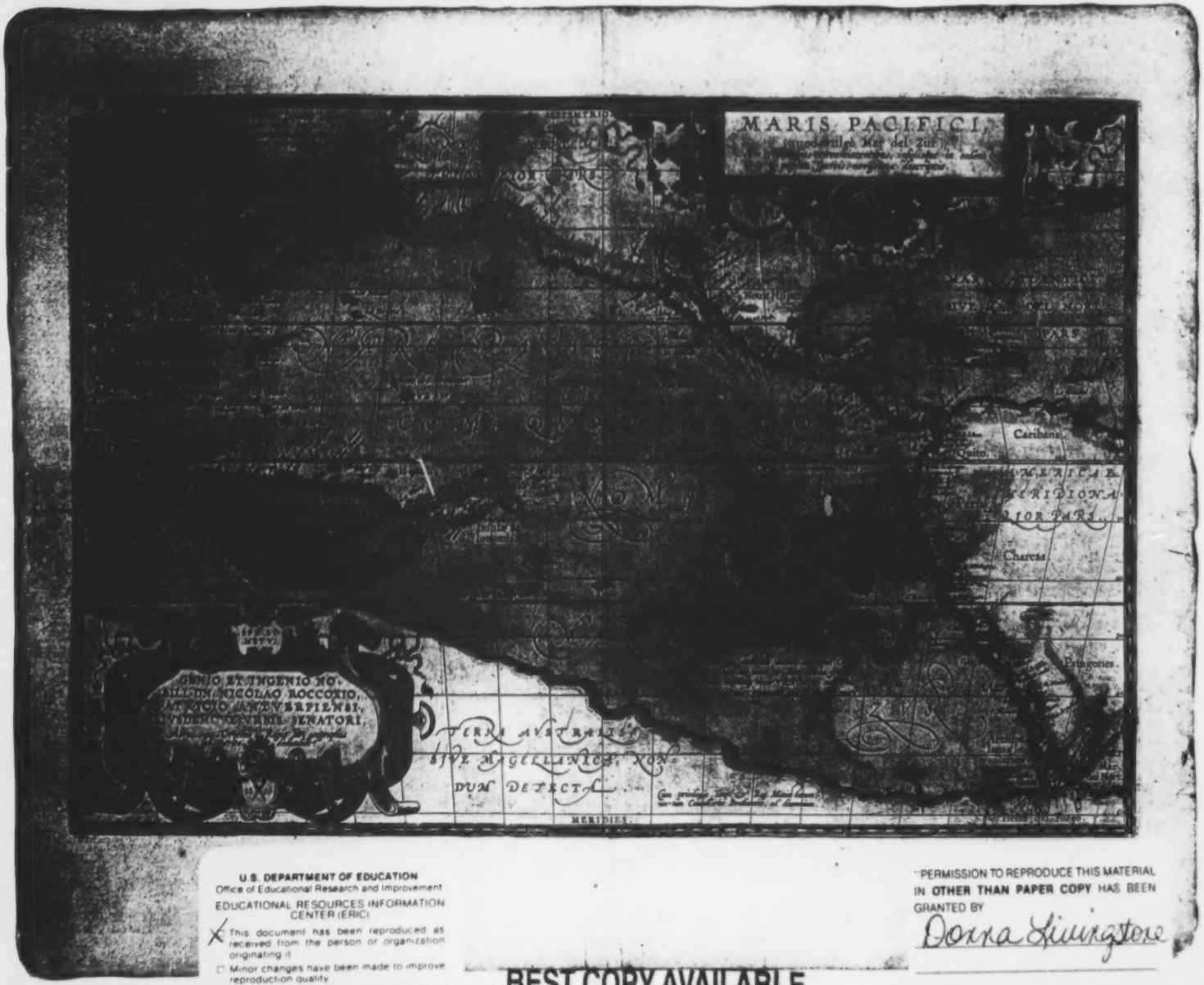
The Canadian West Discovered



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The Canadian West Discovered

an exhibition of printed maps from the 16th to early 20th centuries

Mary Javorski

Glenbow Museum • Calgary Alberta • Canada

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Exhibition

GLENBOW MUSEUM
Calgary, Alberta
January 26 - April 15, 1983

from the collections of the

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Forward

During 1979 the Glenbow Library received Canada Council funding for the purpose of preparing a cartographic exhibition which would outline the evolution of European knowledge of the Canadian northwest. Professor Coolie Verner, an internationally known expert on historical cartography, was engaged as guest curator. Drawing from Glenbow's map collection, the National Map Collection of the Public Archives of Canada, and his extensive personal collection, Dr. Verner selected fifty prirfted maps for the exhibition. Unfortunately, cancer claimed Dr. Verner shortly after he started working with us, and his death in September 1979 halted further work on the exhibition for many months.

Activity resumed a year later when Mary Javorski, a young British Columbia map librarian, agreed to resume the role of guest curator. It was agreed that Dr. Verner's initial selection of maps should be retained for the most part, and working from that base Miss Javorski proceeded to compile the manuscript for this publication.

At this time, I would like to pay tribute to the memory of Professor Coolie Verner. Coolie was an individual of many distinctions; he had served as a bomb disposal expert during World War II. He was known internationally as a distinguished teacher and writer in the fields of Social Anthropology and Continuing Education, and as an outstanding expert on historical cartography. To all who knew him well, Coolie was a scholar, a gentleman, and a friend in the fullest sense of the words.

I would like to thank Mary Javorski, for coming to our aid, and completing the work required for the exhibition and this catalogue. Special acknowledgment is due to Ed Dahl of the National Map Collection. Ed reviewed the initial draft of the catalogue manuscript, assisted with the arrangement of map loans, and provided general advice and assistance throughout.

I would also like to thank Frances Woodward, for her assistance in arranging the loan of many maps from Coolie Verner's former personal collection, now held by the Special Collections Division of the University of British Columbia libraries.

Finally, but far from least, I am pleased to acknowledge the aid of the Canada Council, who provided the funding which made the exhibition and the publication of this catalogue possible.

Len Gottselig
Chief Librarian
GLENBOW MUSEUM

Introduction

The presence of the North American continent came as a surprise to early Ptolemaic navigators who anticipated a clear passage westward to the Spice Islands. Once discovered by the white man, North America quickly became an area of exploration and exploitation. European activities lasted five centuries, with the Canadian west being the final area penetrated. Isolated from the north by difficult weather, from the west by difficult terrain, and from the east by difficult politics, the Canadian northwest was not completely defined, let alone colonized, until late in the nineteenth century.

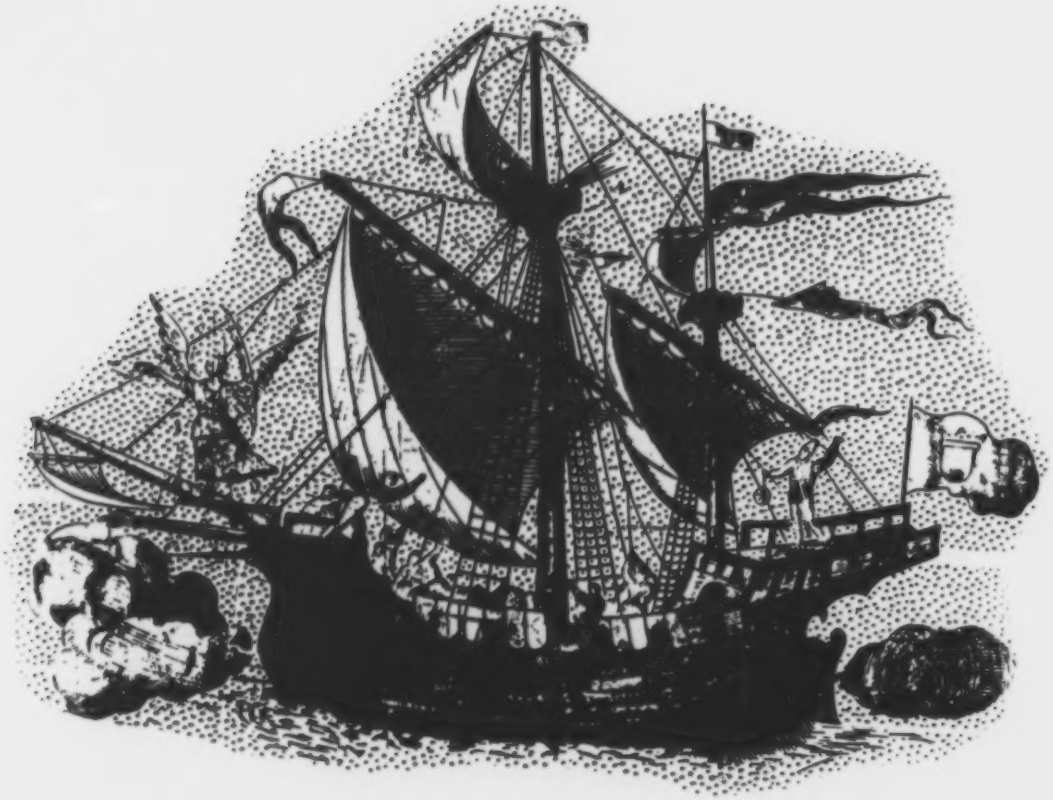
Each of the three major approaches to the west — from the north via Hudson Bay, from the east via the Great Lakes and from the west via the Pacific Ocean — had its own pattern of development. Explorations on all three fronts usually happened in quick succession, and frequently influenced one another. Maps in the exhibition are arranged by area, but a chronological survey is given in the introductory material in an attempt to place individual events in context.

Explorers and navigators of the Canadian west often travelled into areas unknown to the Europeans, and in doing so, attempted to leave a record for others. The maps they generated reflect a growing knowledge of the northern part of North America. The finished map, however, was rarely the sole product of such explorers. Generally the information they gathered was sent back to major European centres to be combined with other expertise and then published. Prevailing attitudes had much to do with the final appearance of these maps. A map is a coalition of fact and design and as the sensibilities of an age change, so, too, do the maps it produces. Seventeenth-century Flemish maps do not resemble those issued in Britain a hundred years later, not only because new information was available, but also because styles of presentation changed. Experiments with projections, with printing methods, with organization of information, with use of colour and with representation of relief all altered drastically during the centuries of European exploration.

Cartographic technique plays an important role in a map's character. Information portrayed, style of presentation and technical skill all influence the finished map. This exhibition is a reflection of these interdependent developments and illustrates the richness inherent in these complex elements of the map-maker's art.

Mary Javorski
Guest Curator
GLENBOW MUSEUM

On Trackless Seas



The Americas were discovered by Christopher Columbus in 1492 on his journey in search of the East Indies. First impressions were not favourable. America was seen as a barrier to eastern trade, and early exploration was primarily an attempt to overcome this new obstacle. Exploration by sea concentrated on finding a way around the continent. As a southern route was possible but held by Spain and Portugal, exploration by other European nations focussed on the search for a northern passage. Exploration by land concentrated on crossing the continent, preferably by water, as ships would still be needed when the Pacific was reached.

The new continent was quickly divided into distinct national spheres of influence. Early exploration was dominated by either French, Spanish or British interests, depending upon the area concerned. France reached the eastern coast of North America first, thereby gaining control of the St. Lawrence River and a likely-looking water route to the Pacific. By 1630, a settlement existed at Quebec, and interior exploration had penetrated westward along the Great Lakes drainage system. Britain, forced north by France's activity in the middle latitudes, began exploration for a passage across the top of the continent. Also by 1630, the voyages of Frobisher, Davis, Hudson and others had led to the large bay later named after Henry Hudson. Channels along the jagged western shore encouraged belief in a passage to the Pacific, but the same voyages introduced explorers to the treacherous Arctic weather. Intense cold and a short ice-free exploration season dampened interest in the area shortly after these initial discoveries, and hopes for a feasible transportation route to the Pacific waned.

Exploration of the North American continent from the western coast was Spain's prerogative, as she claimed sole jurisdiction over Pacific waters. When Francis Drake broke her hold on the southern route to the Orient, late in the sixteenth century, however, Spain shifted her attention from northern exploration to the protection of her gold-rich southern colonies. With Spain's power diminished, a northern passage was not essential and other European nations did not venture far from established trade routes in the Pacific Ocean.

By the middle of the seventeenth century, European attitudes to North America had undergone profound change. Although still seen as a barrier to eastern trade, the land now had its own attractions. North America was a rich source of fish, whale oil, and later, furs. France continued to be a strong force in the interior thanks to the natural transportation system afforded her by the St. Lawrence River and the Great Lakes. Trade, however, was constrained by increased British activity in the southeast. Hostile Iroquois tribes also inhibited southern development. As a result, French exploration was directed towards the northwest. By 1660, Radisson and Groseilliers had made an overland journey to James Bay as well as their more famous explorations in the south-west. This movement north brought France into direct conflict with Britain.

British naval expeditions had claimed Hudson Bay and in 1670, the Hudson's Bay Company had been granted a charter to explore and trade in the surrounding regions. The new company established forts but had to defend the territory against French incursions. A few skirmishes forced the British to take steps to protect their interests inland, and the first tentative explorations away from the coast began under Henry Kelsey in 1690.

At the end of the seventeenth century, furs had become the economic basis of the new area. French interests dominated the interior, and British interests the north. Both nations were willing to use force to protect their sources of supply. Little activity had occurred on the west coast due to Spanish dominance and indifference. The area, moreover, apparently lacked any economic stimulus of the sort which motivated exploration in the east.

A subtle shift in power took place during the early years of the eighteenth century as a result of events elsewhere. Increased European interest in North America was only one manifestation of imperial expansion throughout the world. Control of North American areas often changed hands in return for concessions elsewhere. The Treaty of Utrecht (1713) settled French and British conflict in the Hudson Bay area. The Treaty gave Britain full right to the Bay as well as control of the entrance to the St. Lawrence River. France received considerations in the Caribbean which, at the time, seemed more important to her overseas trade. The direct result of this settlement was the Hudson's Bay Company's unchallenged right to trade in the north. The immediate consequence was a reversal in their exploration policies.

With the north and south now closed to development, French fur traders were forced to explore farther westward to maintain their supply of furs. Unlike British traders, the Frenchmen travelled inland to trade rather than awaiting the Indians' arrival at centralized posts. This aggressive trading policy effectively reduced the quantity of furs delivered to Hudson's Bay Company posts. Dwindling supplies, together with a movement started in England

against the Company's monopoly, forced a change in their policy towards exploration. In 1770, Samuel Hearne was sent into the interior to explore and trade; the emphasis, though, was to be on trade.

Even after France ceded all territorial rights in North America to Britain in 1763, independent French traders were active. These traders later reorganized into larger companies which effectively encouraged exploration by reducing trading duties. Competition over declining furs opened up large tracts of previously unknown territory. Samuel Hearne, Alexander Mackenzie and David Thompson were all employed by fur trading companies. Their discoveries in the years between 1769 and 1812 stemmed from the necessity of finding more supplies and more efficient trading routes.

With the withdrawal of France from North America, Britain controlled the majority of European North America. This control was short-lived as in 1776 the American colonies declared independence. Since these colonies were well established, they posed a threat to Britain's claims in the north and the developing west. Britain turned her attention to the Pacific in an attempt to link claims from east to west and effectively cut off American expansion. Matters in the Pacific had been complicated, however, by the arrival of the Russians. In 1728 and 1745 Russian expeditions under Vitus Bering had charted the eastern coast of Asia and parts of America. Continuing exploration had firmly established Russian interests in North America. Spain, worried by these intrusions into areas she considered her domain, had sent several expeditions of her own northward to survey the coast. Into all this international activity came the British, represented by Captain James Cook. Operating under instructions to secure the area for Britain and to search for the Northwest Passage from the west, he reached the northwest coast in 1778. Cook could neither confirm nor deny the possibility of a passage in the upper latitudes; he did, however, discover the sea otter. This fur-bearing animal's economic significance immediately brought British trading expeditions into northern waters — waters which Spain claimed by ancient right. In an effort to assert her position, Spain established a settlement at Nootka, on what was later named Vancouver Island. As Nootka had previously been used as a British trading base, hostilities developed. Britain, by this time, was totally dependent upon her foreign trade; freedom of the seas was essential to her merchant shipping. She was willing to protect her right to trade in the North Pacific, but was already engaged in other international conflicts. Negotiations prevented confrontation and in the resulting treaty (1790), Spain formally abdicated exclusive rights to the Pacific. The settlement at Nootka was turned over to the British. George Vancouver was sent to implement the principles of the truce and continue Cook's exploration of the coast. His voyage, together with the discoveries of Alexander Mackenzie, established the absence of any major water route across the northern part of America. At the close of the century, the continent had been crossed (Mackenzie, 1792) and a good deal of the Pacific Coast charted. Occasional forays had been made into Arctic waters west of Hudson Bay, but little new information had been gathered.

The nineteenth century was perhaps the most active century of exploration. Simultaneous developments took place in all parts of the continent. In the interior, areas off the major trading routes were finally explored. Politically, this territory was essential to the consolidation of east-west claims and information was first gathered by individuals and later by government surveys. Increased demand for arable land also encouraged detailed surveying. The discovery of gold in the Pacific northwest initiated exploration of western interior regions, and revived interest in the Arctic defined the northern coastline.

The economic pressures of the late eighteenth century carried on into the nineteenth. The search for furs by both the Hudson's Bay Company and the North West Company encouraged exploration west of the Rockies. Competition from young American companies also added urgency to the search. David Thompson (1807) and Simon Fraser (1808) explored the major water routes through the Rocky Mountains but exploration did not continue as terrain made trading uneconomical. Competition between the Montreal based North West Company and the Hudson's Bay Company ended with their unification in 1821, but new conflicts evolved as fur-bearing lands were slowly converted for settlement.

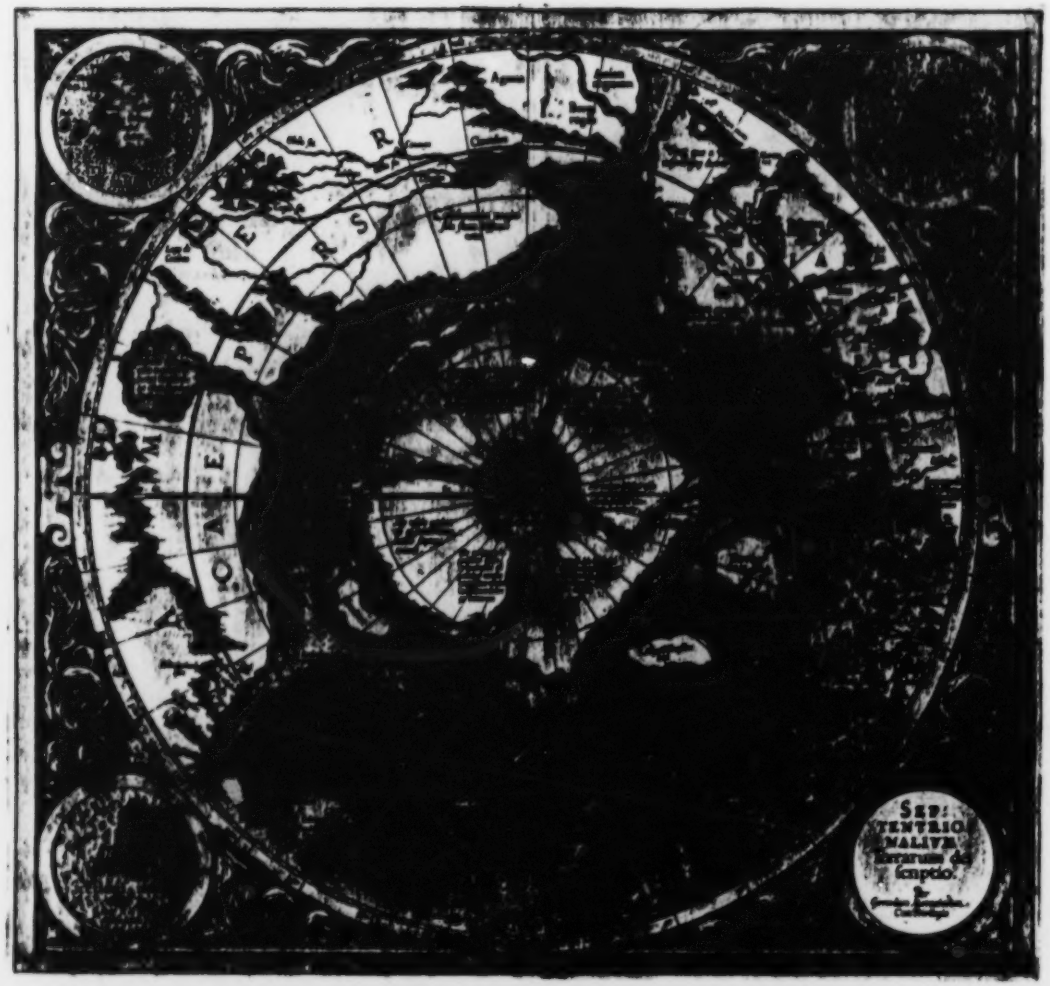
The War of 1812 startled Britain. Because the only effective trading and communication route roughly followed the new American/Canadian border, alternate routes had to be found in case of resumed hostilities. Discoveries by Hearne and Mackenzie had ended all hope of a water route to the Pacific through nor-

thern Canada, so exploration in the Arctic was revived. Northern journeys by Sir John Franklin (1819-22, 1825-27) and voyages by Peter Warren Dease (1837) and John Rae (1846) verified findings made by Hearne and Mackenzie, and extended the known Arctic coasts. By mid-century, however, weather had again diminished all hope of a useful route through the Arctic. Interest flagged until Franklin's last attempt ended in failure. His disappearance had a crucial influence on further Arctic exploration. The fate of Franklin captured the English imagination and funding of voyages to search for his party became fashionable. Expeditions under James Clarke Ross (1848), Horatio Thomas Austin (1850), Robert McClure (1850), Sir Edward Belcher (1852), and Francis McClintock (1859) penetrated and charted the Arctic maze in a remarkably short period. Franklin's fate was ascertained but the Northwest Passage was not navigated until 1908 when Roald Amundsen made the first passage from east to west.

Farther south, the interior plains were opened for settlement. Lord Selkirk founded an ill-fated colony on the Red River in 1813. Conflict with the Indians over impounded hunting grounds, and encouraged incivility to the North West Company (Selkirk had strong ties with the Hudson's Bay Company and attempted to use the colony to block North West trading) finally resulted in hostilities. The idea of settlement survived, however, and in the mid 1850's the interior was explored to determine its agricultural possibilities. Captain John Palliser (1857), Henry Youle Hind and S.J. Dawson (1858) surveyed many areas ignored since Thompson's eighteenth century discoveries.

The sea otter trade on the west coast was of short duration. By 1820 these animals were near extinction, but established settlements were not abandoned. Permanent settlements were needed to maintain control of the area in the face of American expansion, and other natural resources made colonization economically feasible. Discovery of gold in the interior of British Columbia in 1858 put pressure on these few settlements and more townships and roads were surveyed by the Royal Engineers between 1858 and 1863. The gold rush encouraged exploration of difficult terrain in the western interior, and by the close of the nineteenth century most of the Canadian west had been explored and mapped.

Sense and Sensibility



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The mapping of North America involved more than locating the major geographical features. Explorers gathered the information, but it was often compiled in Europe. Artists, scientists, engravers, pressmen, publishers and later government agencies all had a hand in the final product. The development of cartographic principles is shown in these maps as surely as is the continent's outlines.

Early cartographers were concerned with the relationships and placement of the information they received. Unfortunately not much was known. Governments and commercial enterprises were often unwilling to release information gathered on voyages they funded, since it might be of use to rival interests. The little information that was available was often unreliable as explorers were not usually trained in geographic measurement. Much of their information was heresay, gathered from natives and impossible to validate. Lack of information, however, did not inhibit Renaissance cartographers from evolving theories of the New World. As information continued to arrive these theories were modified, but seldom relinquished entirely. They had a tenacity which far exceeded their validity. Even centuries later, residues of these early ideas could be found lurking in still unexplored areas.

Columbus' discovery of the New World roughly coincided with another major event in European history: the invention of printing. Gutenberg's discovery in 1437 revolutionized the dispersement of knowledge throughout Europe. For the first time, information was available in multiple copies to a wider percentage of the population. The earliest maps were printed, like books, from raised surfaces. Unfortunately the carved woodblocks necessary to print a map did not allow for much fine detail and copperplate printing was adapted to alleviate this problem. Copper took additions better than wood and gave a cleaner look to the finished product. As cartographers were able to incorporate additions, correct errors and depict the finer, more complex detail favoured by the Renaissance, copperplate printing quickly became the major method of reproduction. The sharpness of line and elegance of style that characterizes maps until the advent of lithography in the nineteenth century derives from this printing method.

Copperplate printing, however, had its disadvantages. Copper was a more expensive medium than wood and engraving was a lengthy process. Production of a plate involved gathering, drafting and finally engraving the information. When one or more of these steps could be avoided, the cost was considerably lower. Extensive copying of existing maps precluded the gathering stage and additions of new material to older plates avoided re-engraving the entire plate. Plates produced for one purpose were adapted to others and the life of a plate was prolonged whenever possible. Such practices resulted in many inaccurate and out-dated maps.

Early cartography was dominated in turn by several major centres of production. When Europe discovered North America the most influential centres were in Italy. Italian cartographers had access to the discoveries of Spain and Portugal and had a long-established history of graphic design. The artistic influence of the late Renaissance is evident in the maps produced. Controlled decoration, rare use of colour and dignified lettering are characteristic features of maps from this period. Such elements are often easiest to recognize in the cartouches used to frame map titles. Most of the cartouches done in the south are relatively restrained, being either engraved panels or set in a strapwork design. Roman capitals and Italic lettering are used to give balance and proportion. Early maps followed the medieval styling of Ptolemaic woodcuts with abundant internal decoration. Later maps have less extraneous embellishment, although pictorial representation of mountain chains remained popular.

By the late sixteenth century, the Netherlands had become a major cartographic centre. Flemish and Dutch mapmakers gradually gained dominance as the economic importance of northern Europe increased and their excellent craftsmanship became known. Map plates from various European countries were sent to the Netherlands for engraving and all have a characteristic style. These maps are a fine example of geographic fact blended with the artistic sensibilities of the period. The Baroque style which permeated architecture and music is also evident in cartographic design. Unlike the earlier Italian maps, northern maps have more internal decoration. Figures, ships, animals and great sea serpents add embellishment, both to the face of the map and to cartouches. Great flowing capitals exploit the receptiveness of copper to fine detail and colour is abundant. Until the invention of lithography, colour was generally added by hand and its extensive use on these northern sheet maps led to the founding of several new illuminating guilds. Symbols used for physical features are taken from early manuscript maps and are often more decorative than useful.

Maps during this imaginative period attempted to delineate the physical features of the new continent. These early maps show the shapes of the coast, the placement of major drainage systems and, occasionally, political boundaries. Exact relationships,

however, were impossible to map. Although measurement of latitude was relatively accurate, longitude could not be calculated with any consistency. A method of determining precise longitude was not invented until 1772 and without unique longitude and latitude positions, exact placement of features was not possible.

Developments in the eighteenth century were marked by a growing preoccupation with precise representation. Although the maps of the previous generation were beautiful, they were little help in settling border disputes or developing efficient trading routes. Increasing Anglo-French rivalry, the reorganization of colonies and expanding trade necessitated current, accurate maps. A change in mapping procedure resulted and parallel developments in surveying instruments allowed that change to take place.

Knowledge of North America expanded greatly during the century. Increased exploration in all areas meant that information from a variety of sources could be compared. Reports, moreover, were now based on first-hand accounts, and towards the end of the century many explorers were trained in geographic measurement. More information was exchanged as governmental and commercial bans on discoveries were gradually lifted. This information could be plotted more precisely as exact determination of longitude was finally possible. In 1772 John Harrison perfected his chronometer. Based on the comparison of distance and time, the chronometer allowed exact longitude to be calculated even at sea. As features could now be represented in accurate relationships, distances could be determined. Units of measurement were standardized late in the century, enabling these distances to be given in a common scale.

Demand for accuracy also changed production practices. The practices of copying existing work and of recutting new information on outdated plates diminished. A new type of cartographer emerged, schooled in surveying techniques and mapping principles, as well as the art of engraving. These new publishers were capable of accurately assembling material from a variety of sources. Plates were constantly revised and careful attention was paid to errors and omissions.

The shift towards precise representation affected design as well. As attention focussed upon detail, decorative material was forced gradually to the sides of the maps, and finally banished altogether. The High Baroque of the Dutch and Flemish schools was modified. In France, maps were influenced by the Rococo movement. Subtle colours, delicate decorations and a sense of proportion give these maps a new air of lightness and elegance. In Britain, maps were influenced by the Age of Reason. Lettering became more sedate and legible, while colour was used sparingly for emphasis. Large engraved cartouches with appropriate vegetation appeared but usually only on large wall maps of multiple sheets to balance the overall design. Engraved profiles are occasionally found on otherwise unadorned maps to suggest the type of country explored or to indicate elevation. Towards the end of the century, cartouches disappeared from general use and maps were created for their functional rather than decorative properties.

Most of the mapping done in the eighteenth century was topographic. The relationship of cultural and physical features was of primary interest, but other types of mapping also developed. Experiments in thematic mapping began in England under Arthur Halley and hydrographic mapping reached new levels at the end of the century in the work of Cook and Vancouver. Marine cartography concentrates on the configuration of water bodies and the land is only of interest where it meets the water. Hydrographic charts convey very detailed information about the coastlines, but little or none about inland features. Soundings appeared quite early on charts as the measurement of water depth was not complicated. In the eighteenth century, however, hydrology became a science. Water depth was measured consistently at regular intervals and later isobaths — lines of equal water depth — were used. Variations in compass declination were noted and records kept of weather, physical features and unusual currents. These records were often plotted directly onto the charts.

In the maps of the nineteenth century, function continued to be emphasized. Information gradually became more specialized and beyond the scope of individual explorers. Map-makers used information gathered by government surveys whose members were trained in a diversity of sciences. Changes in technology also affected the mapping trade. Increased exploration in North America resulted in an expansion of knowledge but also created a demand for current information. The advent of the Industrial Revolution brought rapid printing methods to feed this demand and the invention of lithography allowed maps to be printed mechanically.

Lithographic printing was invented in 1796 and used as an inexpensive method for duplicating prints and maps. It was used on the continent long before acceptance in Britain and only the demand for fast, accurate information led to its employment. Maps could be produced quickly but did not have the sharp line which

copper gave. A major advantage, besides speed, was the ability to produce substantially larger runs than those taken from copper plates. Combined with mechanical presses, lithographic stones allowed many copies to be made, facilitating a greater distribution of geographical knowledge.

The gradual acceptance of lithography coincides with the development of thematic mapping as a separate branch of cartography. As knowledge of the outline and boundaries of North America became known, more attention was given to the characteristics of the area. Information regarding climate, geology and vegetation grew in importance. Lithography was better suited to this type of mapping since new information could be overprinted onto existing outline maps. Because lithography also allowed continuous tonal variation, colour became an integral part of map design and was used successfully to convey information.

Until the wholesale adoption of lithography inthe mid-century, maps from 1800 on resembled their immediate predecessors. Very little decoration and a cleanness of line made these maps easier to use. Lettering became more exact and geometrial symbols replaced pictorial ones. As accuracy increased in importance, mathematical projections were used with greater skill.

The adoption of lithography did not change such development but its advent opened up new markets. The larger cartographic firms continued to publish and market but maps were now available to other publishers as well. Photography, too, made maps more accessible. Photography was introduced in 1839 and was quickly adapted to map reproduction. Maps could be photographically reduced before printing, allowing a greater versatility in display. Although maps continued to be constructed with increased care, the final look of the map was often a publisher's decision. Maps were used, for example, to promote immigration as the Canandian west was opened for settlement. As much information as possible was crowded onto the same sheet as the map. The design was highly Victorian with engravings of the countryside jostling advertising material and geographical facts. Spurious information and contact addresses were often overprinted onto unoccupied parts of the map; something the original cartographer never envisioned.

Maps such as these, however, were only one example of map publication in the latter part of the nineteenth century. Almost endless variety was now available in size, scale, format, design and information.

Part One

The West before Exploration and Settlement

The earliest maps of North America were largely representations of current geographical theories. Lacking accurate first-hand knowledge, most cartographers evolved theories to explain the unexpected land mass barring the way to the Orient. North America was originally envisioned as a peninsula of Asia (Gastaldi, Map #1) but the concept of an insular continent soon developed. A narrow body of water was believed to separate the continents and was first called the Strait of Anian by Giacomo Gastaldi in a publication dated 1562. Why he chose this name is unknown, but it could have resulted from a misreading of Marco Polo's journals. Whatever its origin, the mythical Strait of Anian became fixed in the western ocean and not even the later discoveries of Bering and Cook could remove it from popular geography.

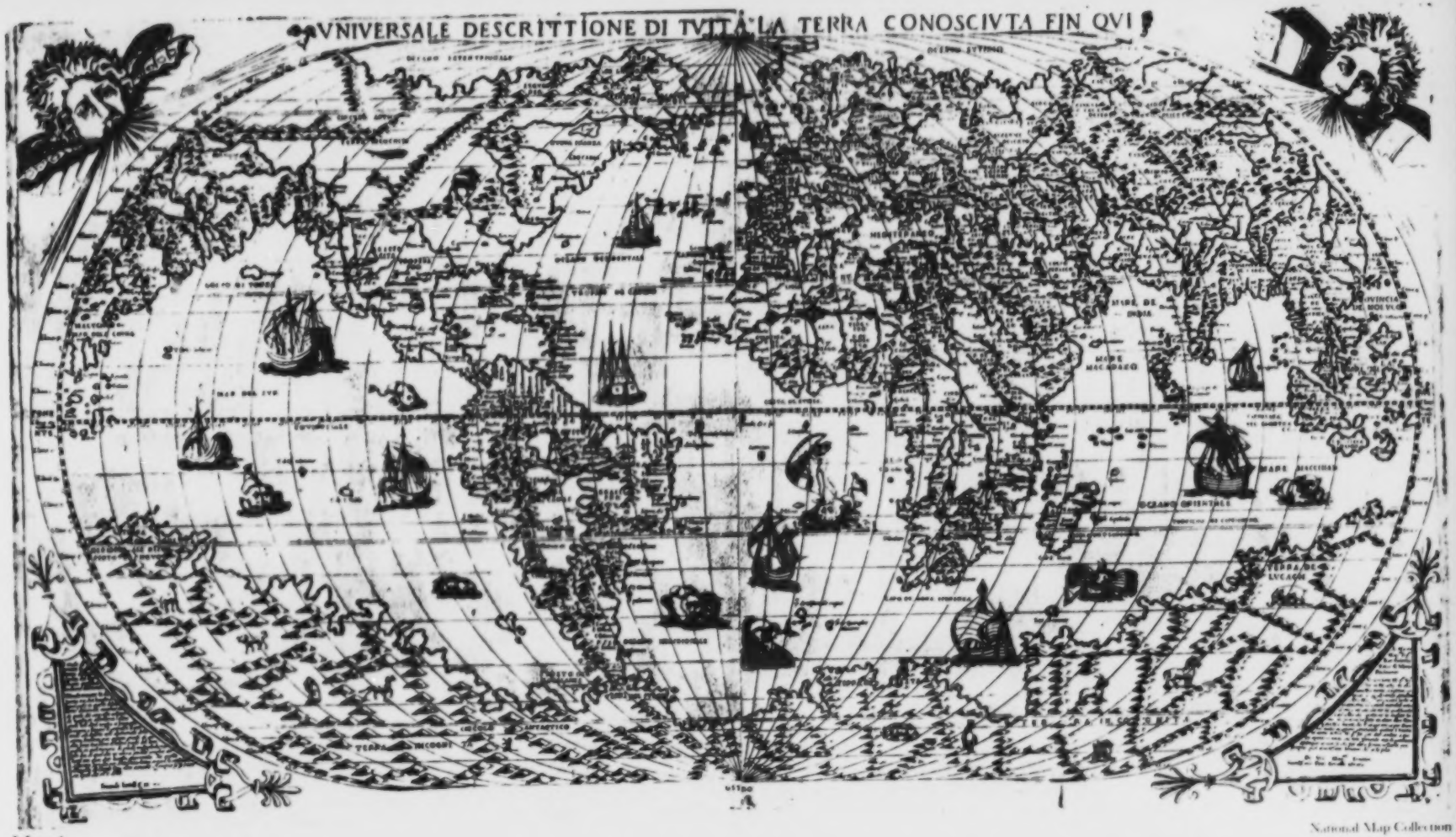
While the idea of an insular North America quickly became accepted, geographers differed over the precise extent of the intervening water body. Bolognino Zaltieri (Map #3) believed in a relatively narrow passage, but others favoured a wider body of water (Delisle, Map #8). Many cartographers quite sensibly avoided the conflict by leaving the area blank (Sanson/Jaillot, Map #5) or by representing only one continent (Briggs, Map #4).

Early cartographers were also unaware of the true configuration of the Arctic region. According to medieval tradition, the North Pole was a solid black rock surrounded by four indrawing seas and bounded by four islands. Gerard Mercator mapped this concept (Map #2) and his representation of a clear water route across the top of North America encouraged belief in a Northwest Passage.

Considerable speculation existed about an inland water route across the continent. Large inland seas and navigable river systems were proposed. Explorers heard rumours of a large water body westward and this as yet undiscovered Lago de Conibas or inland sea began to appear on maps (Mercator, Map #2; Wytfliet, Map #31). With the discovery of the Great Lakes, the inland sea disappeared.

The discovery of Hudson Bay with its jagged coastline encouraged belief in an inland passage. The Bay was often cited as the source of a northwest passage (Briggs, Map #4). Later maps combined this theory with speculation about the west coast. As the Pacific northwest was one of the last areas explored, it remained the longest open to conjecture. In 1752 Joseph Delisle and Philippe Buache published a map of North America based on the voyages of an Admiral Bartholomew de Fonte (Map #6). According to de Fonte, he had encountered an American expedition at the conclusion of its voyage across North America. The Americans had sailed along a trans-continental river into an inland sea and thence through a narrow strait into the Pacific Ocean. This account was fictional, created in 1708 by the editor of the *Monthly Miscellany or Memoirs for the Curious*. In 1744 the material was reissued as fact by Arthur Dobbs in his attacks upon the Hudson's Bay Company. Delisle and Buache gave geographical credibility to this legend and the controversy over its authenticity continued for several decades. Also represented on the Delisle/Buache map is the channel reportedly sighted by Juan de Fuca, another semi-mythical explorer who was actually a Greek sailor named Apostolos Valerianos.

Many other imaginary configurations found their way onto early maps: California as an island (Briggs, Map #4), Greenland as part of the continent (Gastaldi, Map #1) and the mythical Quivira as a settlement (Zaltieri, Map #3). As more accurate information became available, such myths were either abandoned or moved to still unexplored areas of the map. Only the complete exploration of the continent finally banished these speculations entirely.



National Map Collection

Map 1

VNIVERSALE DESCRITTIONE DI TVTTA LA TERRA CONOSCIVTA FIN QVI /

Mapmaker: Giacomo Gastaldi (ca. 1500 - 1565)
Paolo Forlani (fl. 1576)
Ferrando Bertelli (fl. 1556 - 1572)
Date: [1565]
Size: 43 x 77 cm
Scale: RF [1:54,400,000]

Giacomo Gastaldi published this map seventy years after the discovery of the Americas. By this time the configuration of South America was roughly known but North America was still open to conjecture. Like many cartographers, Gastaldi envisioned the new world as part of the old. The Americas appear as an extensive Asiatic peninsula linked to the known world by mountain chains and river systems. A large land mass is proposed in the far south and a clear passage flows along the northern coasts. The format is similar to earlier Ptolemaic maps but copperplate printing has given it a completely different style. Copper replaced wood as a printing surface because it allowed finer detail and more subtle work. Its advantages can be seen in the delicate lettering, the finely drawn ships and the complex mythical animals which populate unknown continents.

30 BEST COPY AVAILABLE 31

SEP: / TENTRIO: / NALIVM / Terrarum de: / Scriptio. / *Per / Gerardum Mercatorem / Cum Privilegio/*

Mapmaker: Gerard Mercator (1512 - 1594)
Date: [1595]
Size: 36 x 39 cm
Scale: RF [1:38,000,000]

Medieval geographers believed the North Pole to be a large black rock surrounded by four islands. Based on a fourteenth-century pamphlet, *Inventio Fortunata*, this map by Mercator is a graphic representation of such thought. Mercator was trained in both mathematics and engraving. Preciseness of hand and mind contributed to an international reputation and his maps were extremely influential. Although based on ancient concepts, this map includes many theories current in Mercator's day. North America is separated from Asia by a narrow strait, a clear passage divides America from the northern Arctic islands and a large inland lake drains westward across the continent. The map is typical of its period, highly coloured and delicately engraved. The map face is unembellished but decoration is achieved through placement of insets and use of a detailed border.

Map 2

National Map Collection
Photography Courtesy of Public Archives of Canada

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IL Disegno del discoperto della / noua Franza, ilquale s'è hauuto ulti: / mamente dalla nouissima nauigatione / de' Franzesi in quel luogo: Nel quale / si uedono tutti l'Isole, Porti, Capi, et / luoghi fra terra chein quella sono. / Venetijs aneis formis Bolognini Zalterij / Anno M. D. LXVI. /

Mapmaker: Bolognino Zaltieri (fl. 1550 - 1580)
Date: 1566
Size: 27 x 40 cm

Map 3
National Map Collection

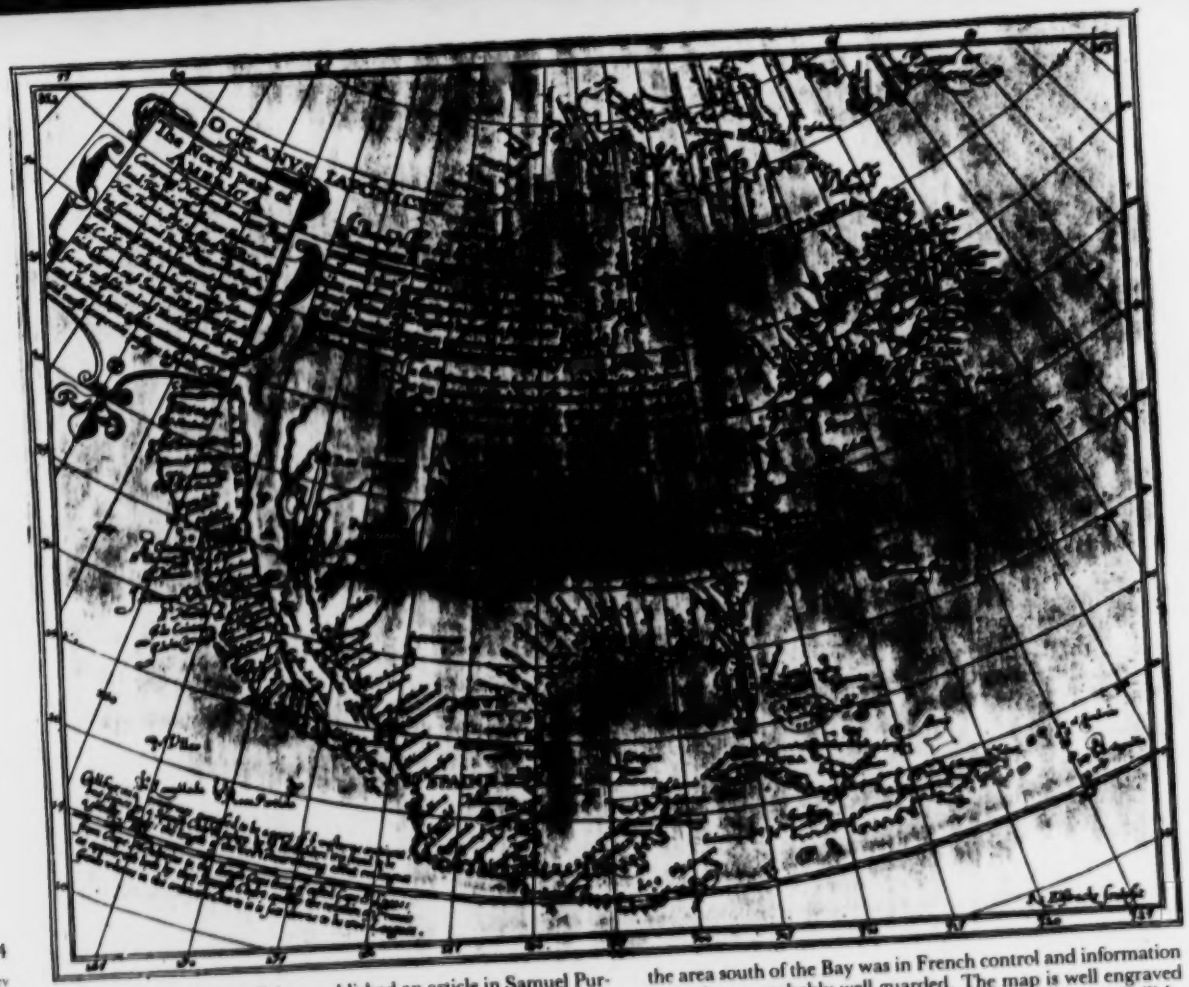
Although Gastaldi had originally conceived of North America as a peninsula (Map #1), he later adopted the theory of an insular continent. In a pamphlet published in 1562, he argued that a narrow channel of water separated the two continents. The pamphlet was accompanied by a map which formed the basis for this later map by Bolognino Zaltieri. On Zaltieri's map North America is divided from Asia by a narrow strait called the Strait of Anian. The North American continent is strangely elongated from east to west, with a clear water passage along the northern shore. Pictorial mountain ranges and extensive river systems adorn the map. As no knowledge of the interior features existed, these symbols were probably used to balance design and fill unoccupied space.

34 BEST COPY AVAILABLE 35

The North part of / AMERICA / *Conteyning Newfoundland, new Eng: / land, Virginia, Florida, new Spaine, and* / Noua Francia, *wth y riche Iles of HiSpaniola, Cu / ba, Jamaica, and Porto Risco, on the South, / and upon y West the large and goodly Lland / of California. The bonds of it are the Atlan: / tick Ocean on y South and East sides y South / Sea on y west side and on y North Fretum Hudson /* and Buttons baye a faire *entrance to y nearest / and most temperate passage to Japan & China /*

R. Elstracke Sculpsit /

Mapmaker: Henry Briggs (1561 - 1630)
Date: 1625
Size: 27 x 34 cm
Scale: RF [1:24,000,000]
From: Purchas, Samuel. *Hakluytus posthumus or Purchas his pilgrimes*. London, 1626.



Map 4

Glenbow Library

In 1625 Henry Briggs published an article in Samuel Purchas' *Hakluytus posthumus*, giving his views on the "nearest and most temperate passage to Japan & China." The article was accompanied by this map engraved by R. Elstracke. Although not mapped, the passage left Hudson Bay and presumably entered the Pacific somewhere in the region covered by the notes or the cartouche. Briggs was an Englishman and based most of his map on early exploration of Hudson Bay. The Great Lakes do not appear as the area south of the Bay was in French control and information about it was probably well guarded. The map is well engraved but more sedate than most of this period. Such lack of embellishment might be due to the map's purpose; it was printed to accompany an article rather than as a sheet map. English map engraving was in its infancy at this time and such inexperience might also account for less decoration.

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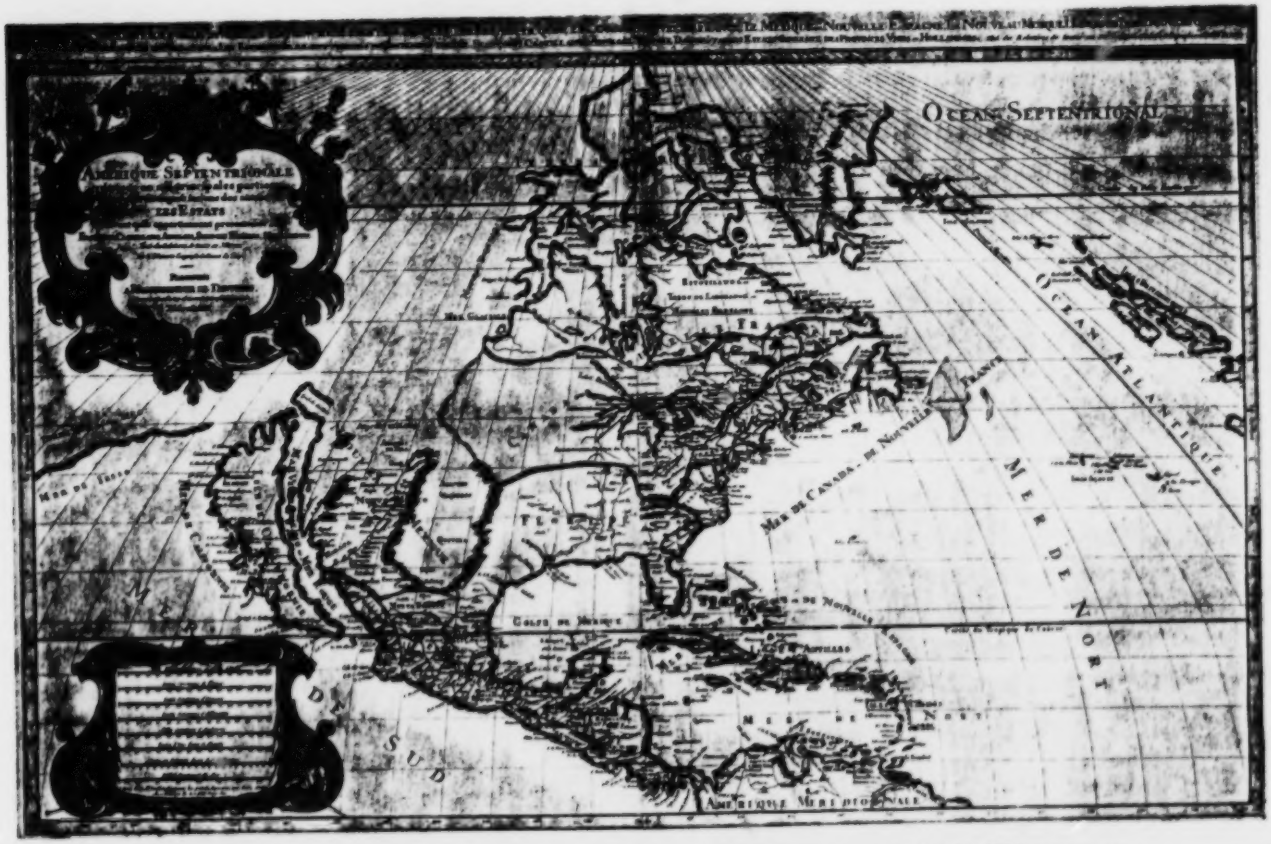

L'AMERIQUE SEPTENTRIONALE / divisée en ses principales parties, / ou sont distingués les vns des autres / LES ESTATS / suivant quils appartiennent presentemẽt aux / FRANÇOIS, CASTILLANS, ANGLOIS, SUEDOIS, DANOIS, HOLLANDOIS / *Tirée des Relations de toutes ces Nations. / Par le S. SANSON, Geographe Ordinaire du Roy /* PRESENTEE / A MONSEIGNEUR LE DAVPHIN, / *Par son tres-humble, tres-obeissant, et tres fidele Serviteur, / Hubert Iaillot /*

A Paris Chez H. Iaillot joignant les grandes Augustins, aux deux Globes / Avec privilege du Roy pour Vingt Ans. /

Mapmaker: Nicolas Sanson (1600 - 1667)
Hubert Jaillot (1640 - 1712))
Date: [1690]
Size: 52 x 85 cm
Scale: RF [1:16,000,000]

Map 5
Glenbow Library

Nicolas Sanson sensibly avoided current discussions about the North American interior by not portraying the area. His map of 1650 was the basis for this map published by Hubert Jaillot in 1690. Both cartographers were French; Sanson was Geographer to the King and Jaillot a leading publisher of his day. The map shows most of the Hudson Bay area then explored, the basic configuration of the Great Lakes, and California as an island. California was another controversial area often found on early maps. Its peninsular nature was established in 1698 but many cartographers, one as late as 1747, continued to represent it as an island. An elegant projection and a large late-Baroque cartouche provide the map's decoration. Strange animals, mythic natives and coats of arms combine around the title and scale information, giving reign to current decorative sense but leaving the face of the map free from extraneous material.

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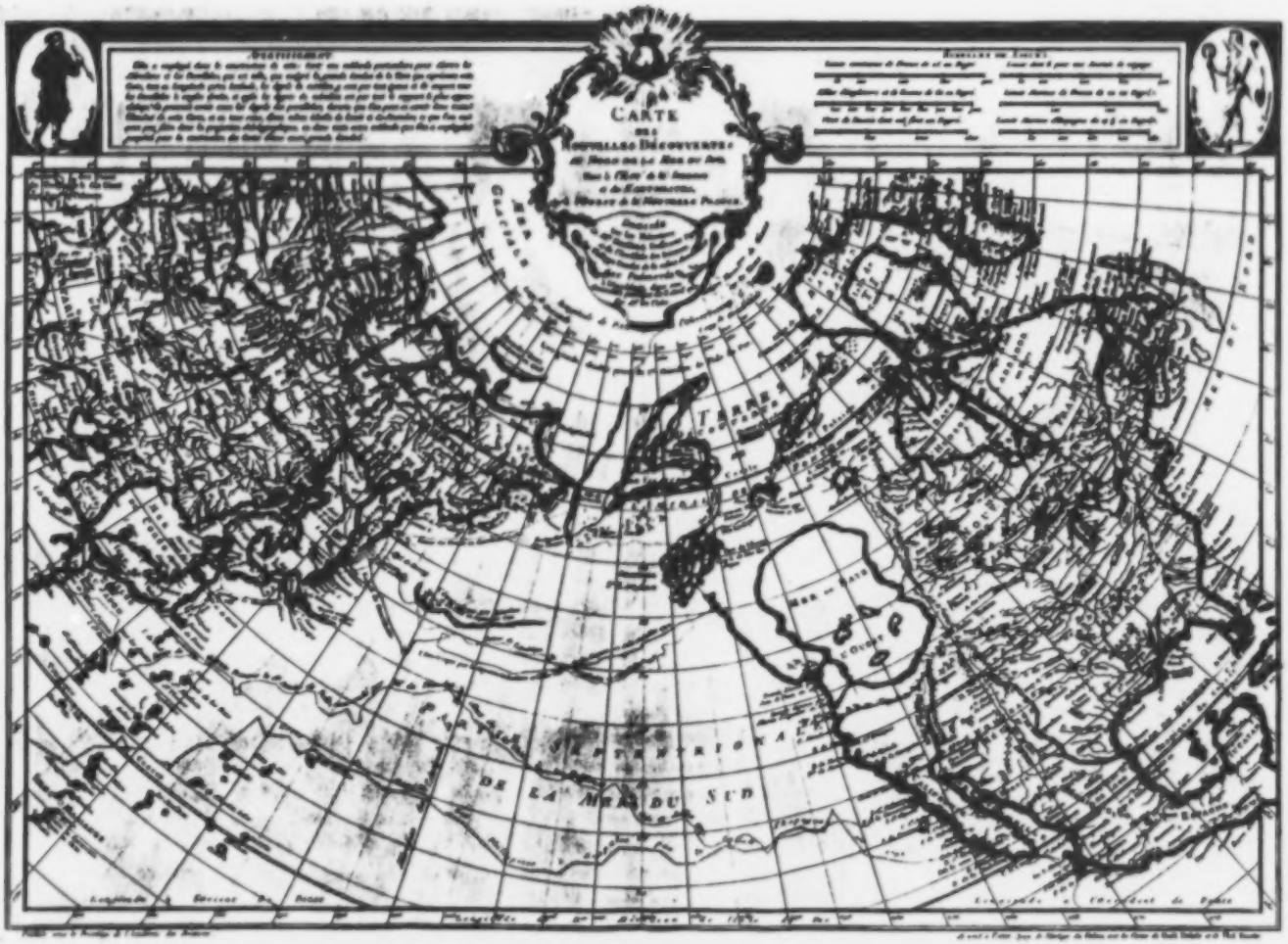
CARTE / DES / NOUVELLES DÉCOUVERTES / *AU NORD DE LA MER DU SUD, / Tant a l'EST de la SIBERIE / et du KAMTCHATKA, / Qu'a l'OUEST de la NOUVELLE FRANCE. / DRESSEE* / Sur les Mémoires / *de M DELISLE* Professeur Royal / *et de* l'Académie des Sciences. / *Par Philippe Buache de la même Académie / ET PRESENTEE* / a l'Académie, *dans son / Assemblée publique du 8. Avril 1750.* / *Par M* De l'Isle. /

Publiée sous le Privilége de l'Académie des Sciences. /

Se vend à PARIS, Quay de l'Horloge du Palais, avec les Cartes de Guill. Delisle *et de* Phil. Buache. /

Mapmaker: Joseph Delisle (1688 - 1768)
Philippe Buache (1700 - 1773)
Date: [1752]
Size: 37 x 63 cm
Scale: RF [1:21,500,000]
From: Delisle, J. N. *Explication de la carte* ... A Paris, chez Desaint Saillant, 1752.



Map 6
Glenbow Library

Joseph Delisle was a Frenchman who began his career in Russia, founding the Russian Academy of Sciences in St. Petersburg and acting as official cartographer until his return to France in 1747. In a presentation to the French Academy in 1750, Delisle introduced information from the Russian archives, as well as details from the spurious de Fonte journals. The accompanying map gave credibility to de Fonte's fictitious discoveries and initiated a spirited controversy which lasted several decades. The inland water route across northern Canada is shown, as is the giant Mer ou Baye de l'Ouest. Information gathered by Russian expeditions appears in the North Pacific. The Baroque figures, favoured by Flemish and Dutch mapmakers, have been banished to the borders while the cartouche is a delicate Rococo moulding of intertwined vegetation.

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Part Two

Exploration through the Arctic

The need for a short sea route to the Orient motivated exploration in the Arctic. Led to believe in an open northern passage by early maps, the first explorers were optimistic in their search. The discovery of Hudson Bay and its various likely-looking channels encouraged such hopes. Expectation persisted in the face of inclement weather, unfavourable tides and incredible hardships.

A clear, navigable passage across the top of North America would have solved many problems. The southern route around Cape Horn to lucrative eastern trade was held by unfriendly interests. Prevailing trade winds made return by this route difficult and most ships were forced to take the long, perilous route home around the Cape of Good Hope. A northwest passage could exploit the westerlies blowing across the northern Pacific. Expansion of the fur trade made alternative transportation routes attractive and increasing economic interest in the Arctic further encouraged early exploration.

Because the Arctic offered its own riches of fish, whale oil, seal skins and ivory, many early voyages were financed by merchants. When the cost of discovery in men and equipment became too great, interest in new adventures diminished. Tremendous ice packs and intolerable cold, coupled with a short exploration season, limited investigations to Hudson Bay. After initial voyages by Martin Frobisher (1576), John Davis (1585), Henry Hudson (1610) and others, exploration in the Arctic virtually ceased and was not substantially resumed until the nineteenth century. Sixteenth-century maps reflect this early interest (Blaeu, Map #7) but little change in outline can be seen on succeeding maps (Sanson/Jaillot, Map #5; Delisle, Map #8).

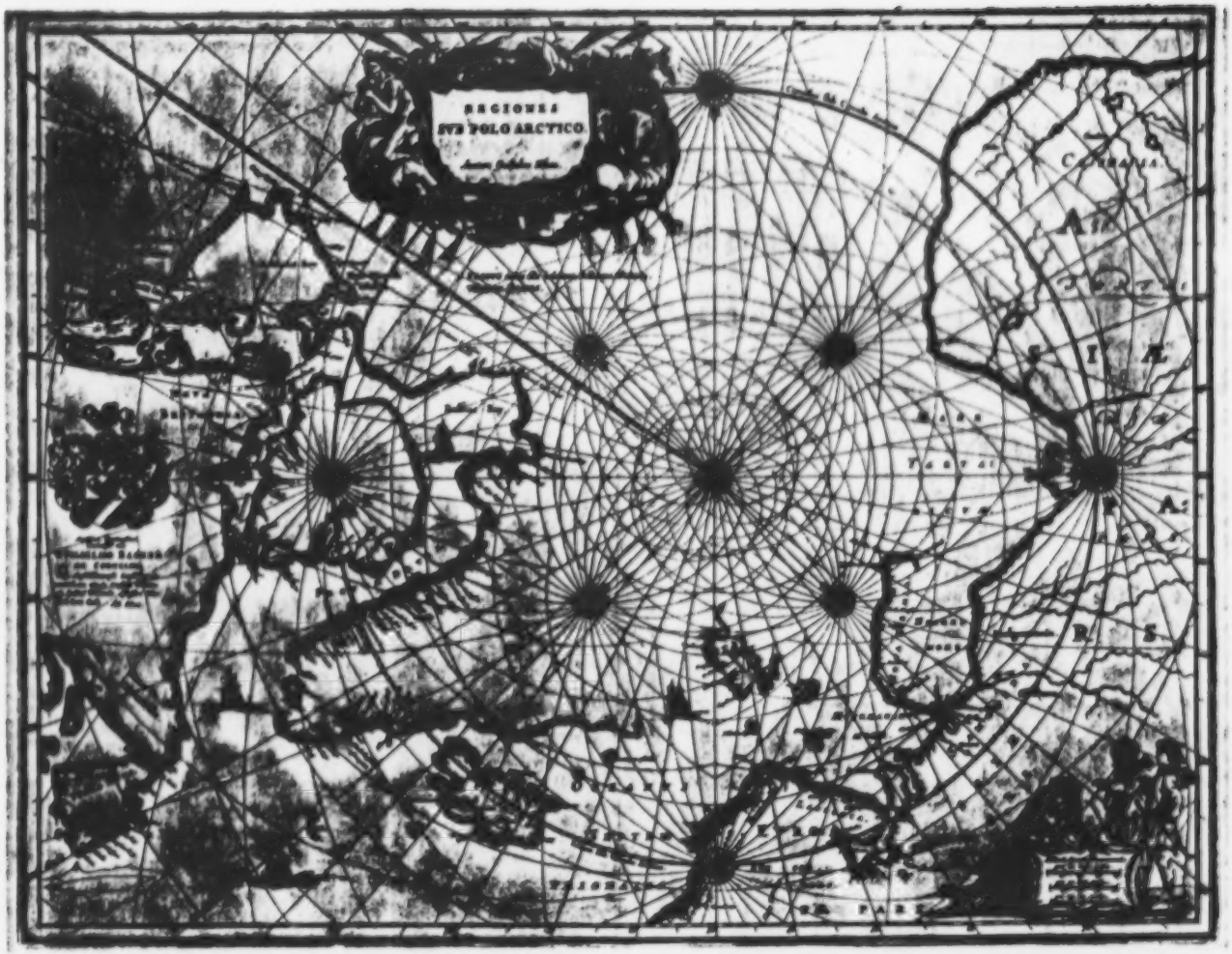
Most of the Arctic coast was mapped in the nineteenth century. Explorations by Hearne (Map #33) and Mackenzie (Map #34) proved that no water systems drained westward across the continent and attention turned once more to a northern water route. Nineteenth-century exploration can be divided into two parts; early quests for a navigable water route and later searches for Sir John Franklin.

By 1818 the area around Hudson Bay had been explored and the most promising potential channels to the Pacific were found to be landlocked. Expeditions by John Ross (1818, 1829-33), William Parry (1819-20, 1821-23, 1824-25), and John Franklin (1819-22, 1825-27) diminished hopes of possible entry farther north. These new explorers were furnished with more precise instruments, and information sent back to England to be mapped increased in both quantity and quality. Mapmakers were hard pressed to keep up with new information and plates were constantly revised. Aaron Arrowsmith's original Arctic plate (Map #9) was altered eleven times throughout the century until its final issue in 1878 (Map #14). Because information arrived continuously and plates took time to produce, most contemporary maps supplemented one another. Seldom did any available map include all available knowledge.

In the decade following Franklin's disappearance in 1847, thirty-seven expeditions were sent to the Arctic. Most of the northern coastline was mapped during this period. Francis McClintock returned with conclusive evidence of Franklin's death in 1860 and intensive exploration ceased. Interest, however, did not fade entirely. The Northwest Passage was still a challenge and in the final decades of the century, the race for the North Pole drew many international adventurers.

REGIONES / SVB POLO ARCTICO. /
Auctore Guilielmo Blaeu. /

Mapmaker: Willem Janszoon Blaeu (1571 - 1638)
Date: [1638]
Size: 40 x 52 cm
Scale: RF [1:14,600,000]
From: Blaeu, W.J. *Le theatre du monde ou nouvel atlas*. Amsterdam, 1638



Map 7

Glenbow Library

By the seventeenth century, the Netherlands had become the dominant area of cartographic production due, in part, to the fine work issued by the firms of Blaeu and Hondius. Willem Blaeu was born in Holland and trained as a map and instrument maker. His maps are noted for their fine engraving and sure sense of design, for although the decoration is lavish it seldom obscures the information presented. This map is a polar projection, like that of Mercator (Map #2), but the Pole is off-centre to allow more of North America to appear. Most of the current European discoveries in the Arctic have been mapped although Hudson Bay is land-locked in the south and west which is unusual. Lines of compass delineation flow gracefully into the Pole. The representation of wind and compass direction was an ancient manuscript tradition evolving from the need to know direction and landfall over large bodies of water.

44 BEST COPY AVAILABLE 45

HEMISPHERE SEPTENRIONAL / pour voir plus distinctement / LES TERRES ARCTIQUES / *Par Guillaume* Delisle de l'Academie R^le^ des Scien^ces^ / *A Paris Chez l'Auteur sur le Quay de l'Horloge* / avec Privilege *Juillet 1714.* /

Mapmaker: Guillaume Delisle (1675 - 1726)
Date: 1714
Size: 44 cm in diam. on sheet, 55 x 77 cm
Scale: RF [1:37,000,000]

The work of Guillaume Delisle was highly respected by his contemporaries. He was trained by Jean Dominique Cassini, a pioneer of modern cartography, who believed in accurate representation based on fact. Such concern is also seen in the work of Delisle. As little as is possible is based on conjecture. California appears as a peninsula and the vast expanse of western Canada is blank. Configuration of the Arctic has not altered substantially since Blaeu (Map #7) although Greenland is now attached to the mainland. Unexplored channels in Hudson Bay are left open and river systems west of the Bay are mapped. The map is completely unadorned, lacking even a cartouche and reflects the shift away from decorative cartography by serious mapmakers.

Map 8
Glenbow Library

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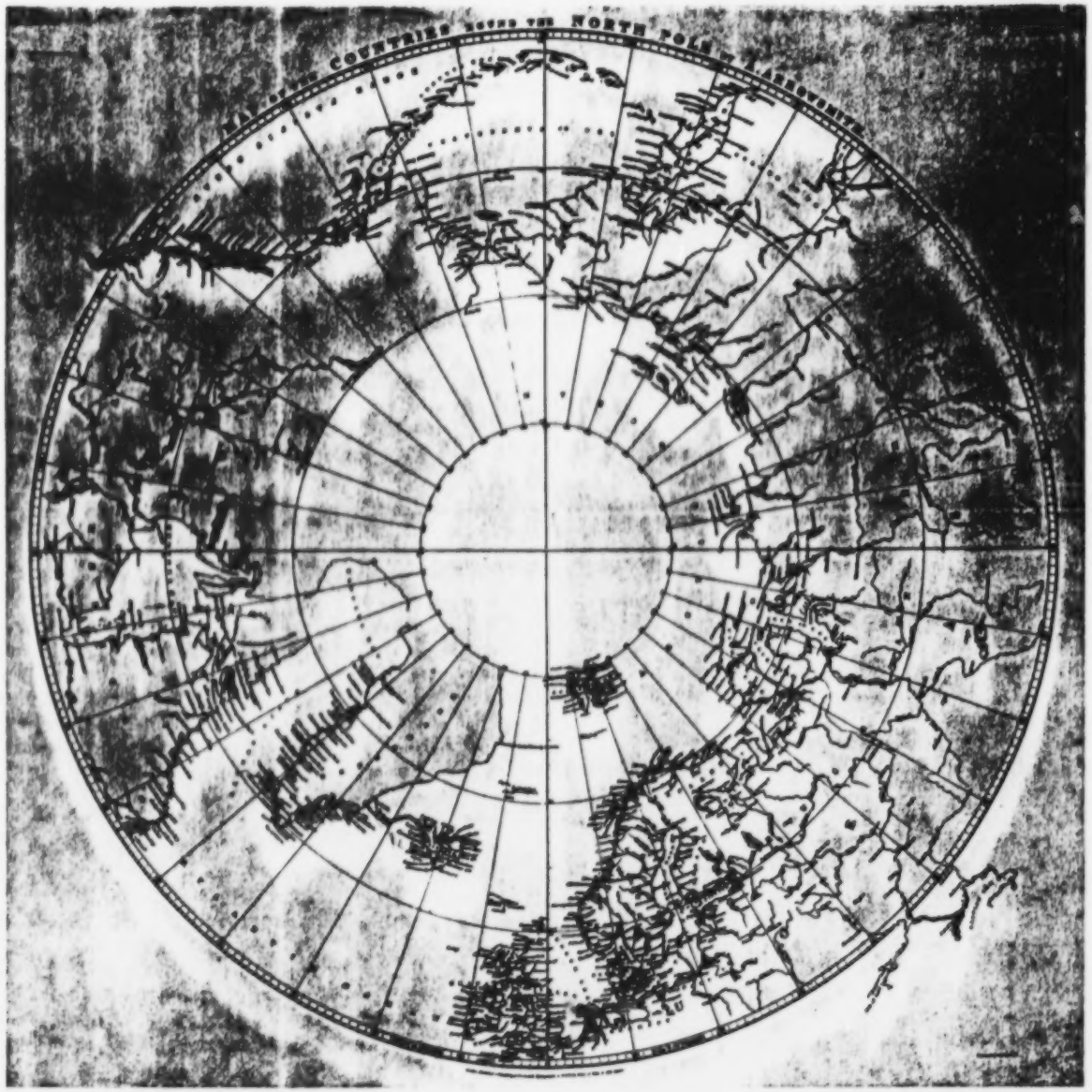
MAP OF THE COUNTRIES ROUND THE NORTH POLE BY A. ARROWSMITH. / *London, Published 1 Feb, 1818, by A. Arrowsmith, Hydrographer to H.R.H. the Prince of Wales, 10 Soho Square.* /

Engraved by Sidney Hall /

Mapmaker: Aaron Arrowsmith (1750 - 1823)
Date: 1818
Size: 61 cm in diam. on sheet, 67 x 68 cm
Scale: RF [1:14,800,000]

The Arrowsmith firm played a substantial role in English cartography and in the mapping of Canada. Aaron Arrowsmith had access to Hudson's Bay Company records while his nephew John, as Hydrographer to the King, was able to incorporate information from government expeditions. Both Arrowsmiths demanded that their works be carefully researched and composed of the latest information available. Aaron's flair for logically combining material from many sources is reflected in this map issued just as interest in the Arctic was reviving. Hudson Bay is again landlocked in the west but the configuration is now based on first-hand information. Hearne and Mackenzie's interior expeditions are mapped and credited, while Cook and Vancouver's explorations are indicated in the carefully delineated Pacific coast.



Map 9
UBC Library

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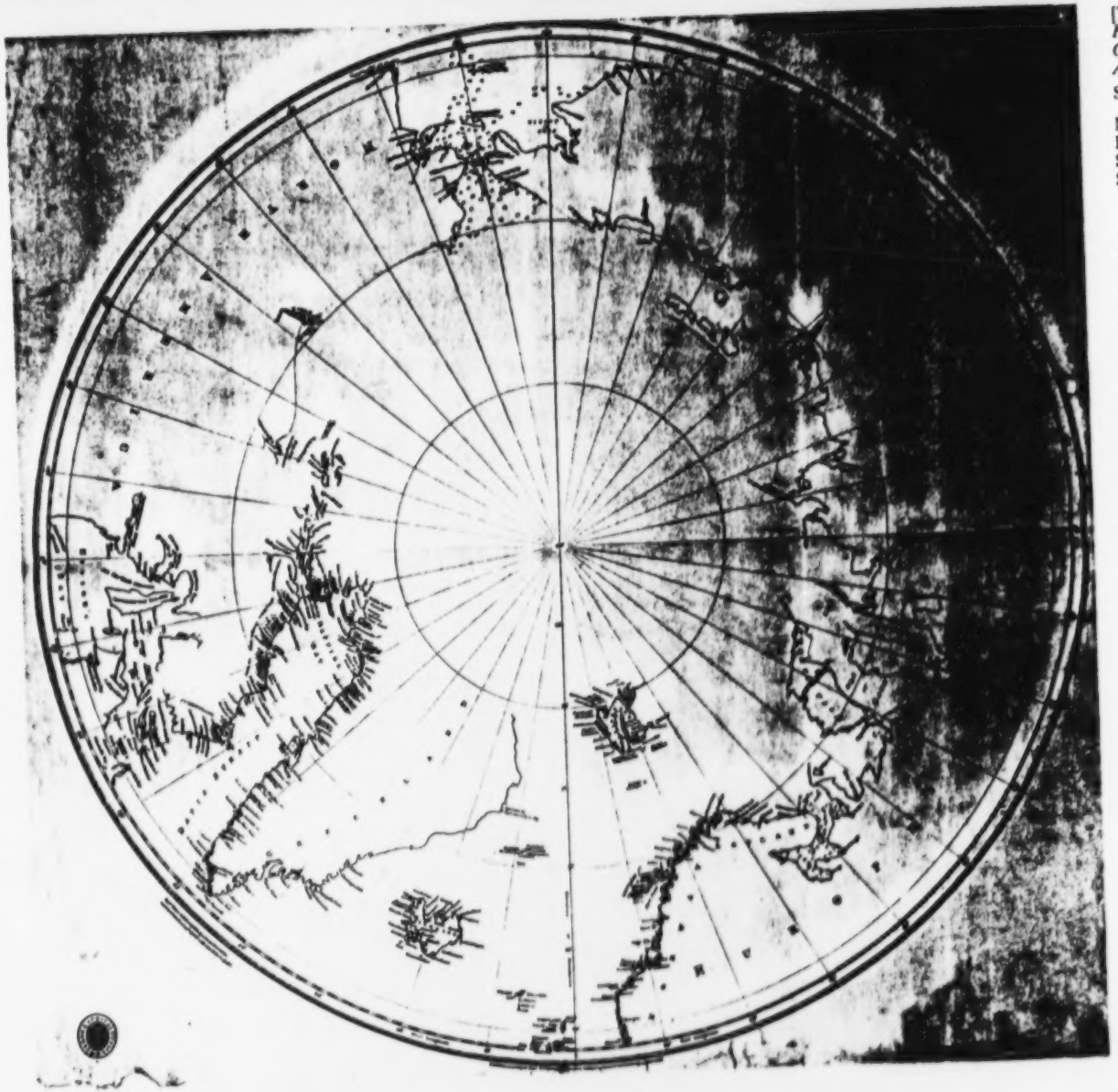

[The Areas around the North Pole] /
Published according to Act of Parliament by Capt. Hurd R.N. Hydrographer to the Admiralty 14th Feb 1818. /

Seal: Hydrographical Office /

Mapmaker: Thomas Hurd (1757? - 1823)
Date: 1818
Size: 59 cm in diam. on sheet, 62 x 64 cm
Scale: RF [1:11,750,000]

Captain Hurd served in the Royal Navy and in 1808 was appointed to its recently created Hydrographical Office. While Arrowsmith's contemporary map (Map #9) concentrated on topographical features, Hurd presented the Arctic's hydrology. Emphasis is placed on coastlines rather than interior features and no river systems are marked. Only areas explored are fully delineated, with projected coastlines given by dotted lines. Soundings taken by Captain Cook in Bering Strait (Map #19) are included as are the mouths of the Coppermine and Mackenzie Rivers. The accurate naming of every point of land, best seen in the Davis Strait area, follows another hydrographical tradition. The compass declinations used to reach landfall had to be uniquely identified; each landfall was therefore carefully named. As instruments improved their precision reduced dependance on landfalls but the policy of naming remained.

Map 10

UBC Library

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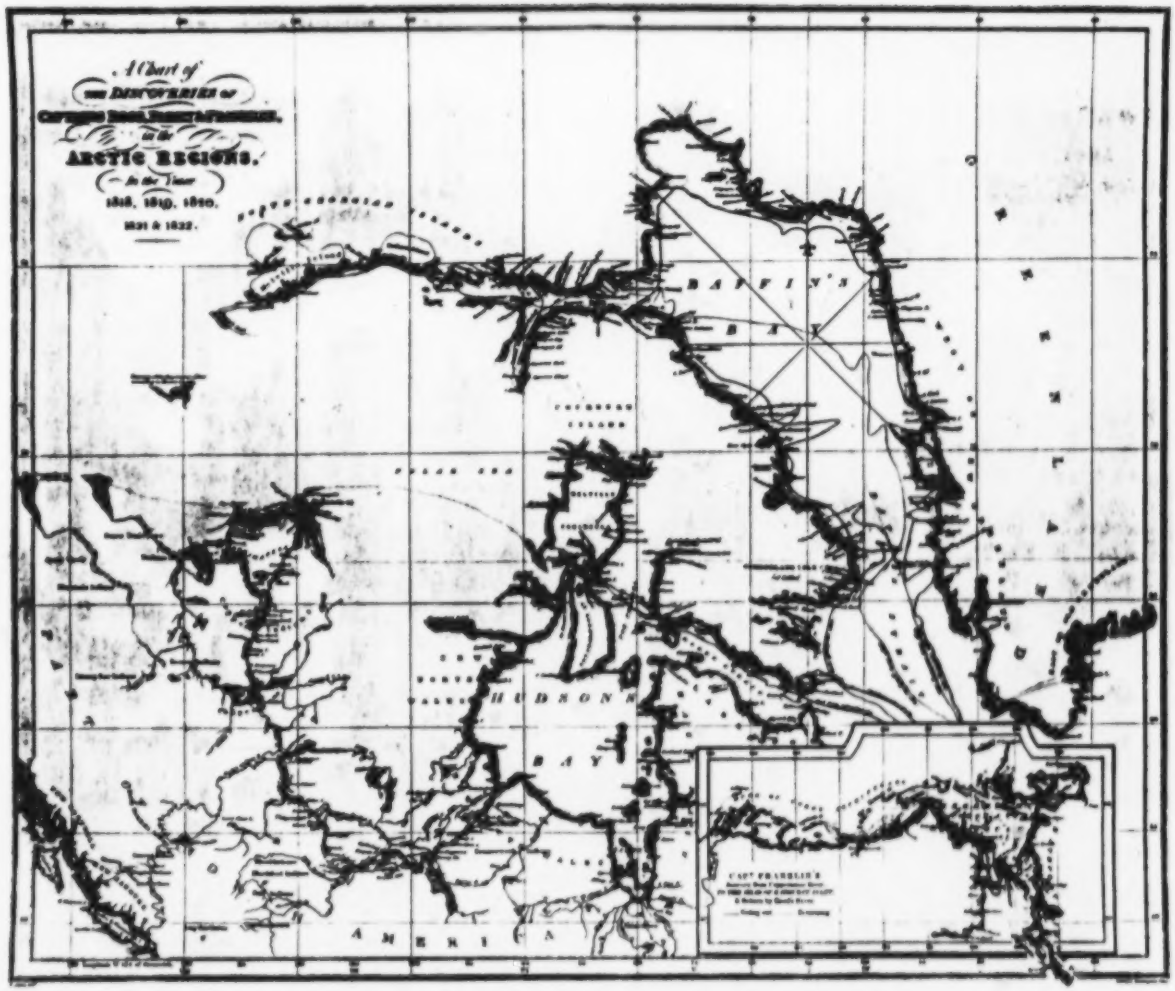
A Chart of / *THE DISCOVERIES OF* / CAPTAINS ROSS, *PARRY* & FRANKLIN, / *in the* / ARCTIC REGIONS, / *In the Years* / 1818, 1819, 1820, / 1821 & 1822. /

J. Aspin, del. /

Hewitt, sc. Buckingham Place. /

Mapmaker: Jehoshophat Aspin (fl. 1814 - 1840)
Date: [1827]
Size: 49 x 60 cm
Scale: RF [1:7,250,000]
From: *A New General Atlas* . . . Edinburgh: J. Thomson & Co., 1827.

Arctic exploration in the first part of the nineteenth century concentrated on the area north and slightly west of Hudson Bay. This map was constructed by J. Aspin, an English cartographer, who flourished during the period of renewed Arctic interest. He designed this map on a large scale to follow closely the routes of expeditions recently mounted. More detail was given when needed in an enlarged inset. Ross' voyage of 1818, Parry's two voyages (1819, 1821) and Franklin's overland expedition of 1819 are marked in colour. Care has been taken to accurately represent all details. Corrections have been made where necessary, resulting in a relocation of Hearne and Mackenzie material. Because instruments used by these explorers were not reliable, their calculations were inaccurate. Although corrected positions are given, previous locations are included in a note.



Map 11

Glenbow Library

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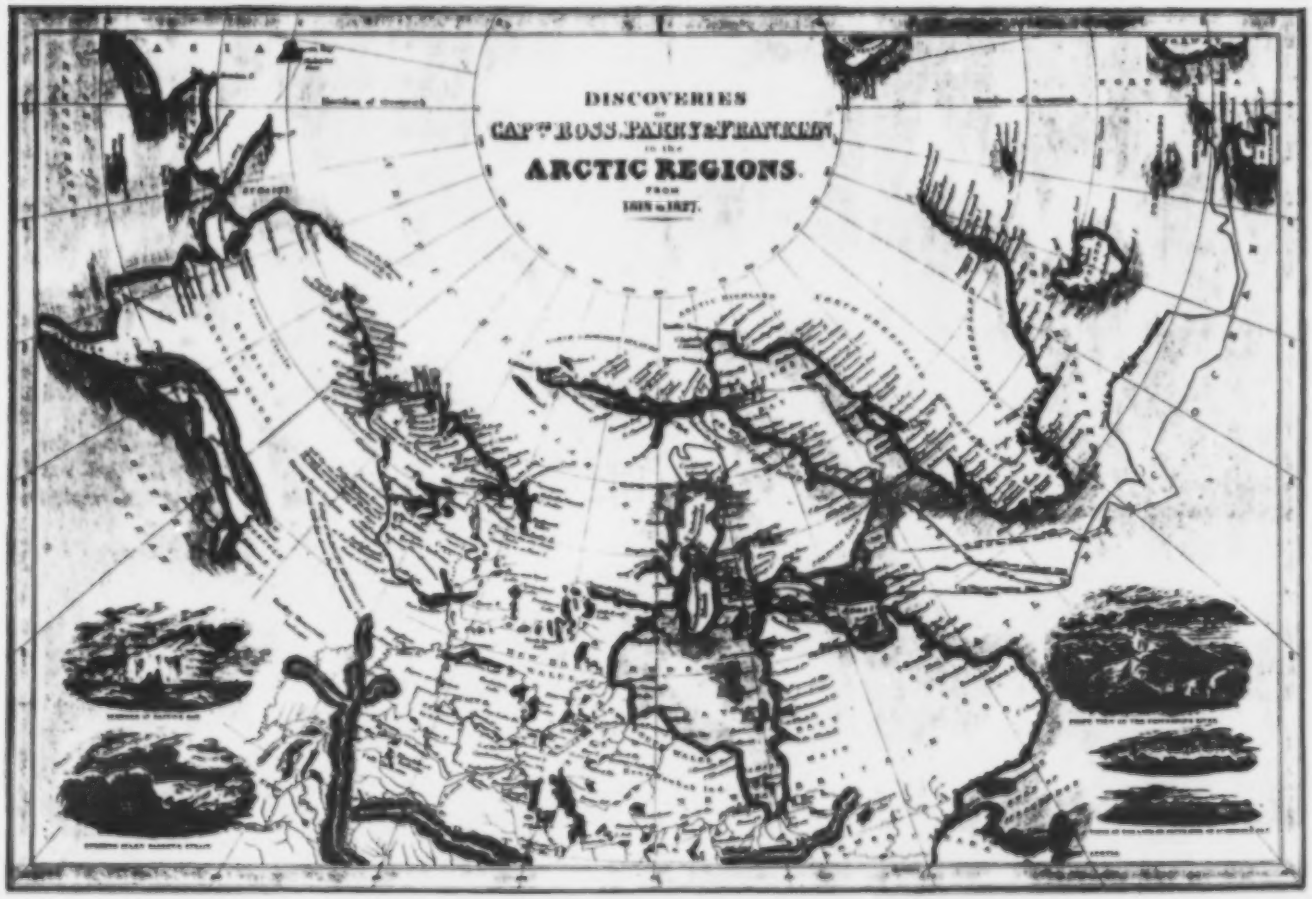

DISCOVERIES / OF / CAP^{TS} ROSS, PARRY & FRANKLIN / in the / ARCTIC REGIONS. / FROM / 1818 TO 1827. /

XLIV /

Mapmaker: James Wyld (1790 - 1836)
Date: [c. 1830]
Size: 28 x 43 cm
Scale: RF [1:17,500,000]

Map 12
Glenbow Library

Because exploration in North America had for many years concentrated on interior or western areas, popular knowledge of the Arctic was slight. Revived interest in northern exploration created a demand for more Arctic material. Many maps and reminiscences appeared, outlining voyages and describing the tribulations encountered. The number XLIV in the upper right hand corner of this map by James Wyld suggests it was published with accompaning material. Wyld was a founding member of the Royal Geographical Society and a noted geographer. His map is done in minute detail, giving the tracks of Parry's voyages in 1818 and 1821 as well as information on the Franklin and Ross expeditions. Finely engraved artistic impressions suggest the terrain in which the explorations occured. These vignettes also indicate scale and height of landforms.

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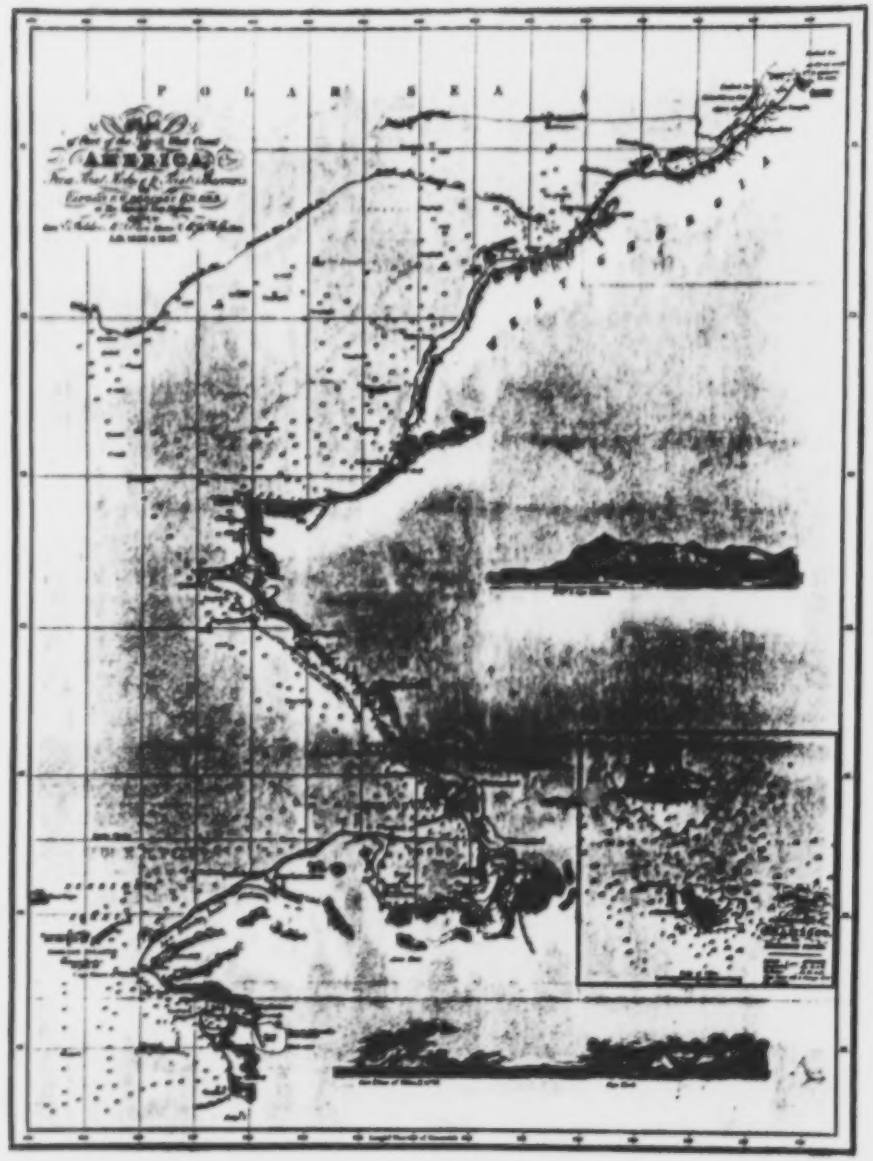
CHART / *of Part of the North West Coast* / *OF* / AMERICA, / *From Point Rodney to Point Barrow.* / By / *CAPTAIN F. W. BEECHEY R.N F.R.S.* / *in His Majesty's Ship Blossom,* / assisted by / *Lieut. E. Belcher, Mr. J. Elson, Master & Mr. Jas. Wolfe, Mate.* / A.D. 1826 & 1827. /

Published by Colburn & Bentley London 1830. /

J. & C. Walker sculp^{t}. /

Mapmaker: Frederick W. Beechey (1796 - 1856)
Date: 1830
Size: 43 x 32 cm
Scale: RF [1:1,850,000]
From: Beechey, F.W. *Narrative of a Voyage to the Pacific & Beerings Strait.* London: Colburn & Bentley, 1831.

The expedition led by Captain Beechey attempted to locate the Northwest Passage from the Pacific coast. Following Captain Cook (Map #19), Beechey continued the Navy's careful hydrographic mapping of the northern latitudes. The map contains an immense amount of knowledge. A proliferation of soundings occur although isobaths linking areas of equal depth are only used to indicate the three metre mark. Information regarding ocean bottom, water currents and ice packs are given and coastal height is suggested through use of hachures. Hachuring as a technique for representing relief had previously existed but was not standardized until the late eighteenth century. Height was suggested by the length and thickness of the strokes; the shorter and closer together, the steeper the terrain. The severity and close work of the map is off-set somewhat by the titles of both map and inset. Elaborate flourishes add a decorative touch as do the engraved profiles.



Map 13

Glenbow Library

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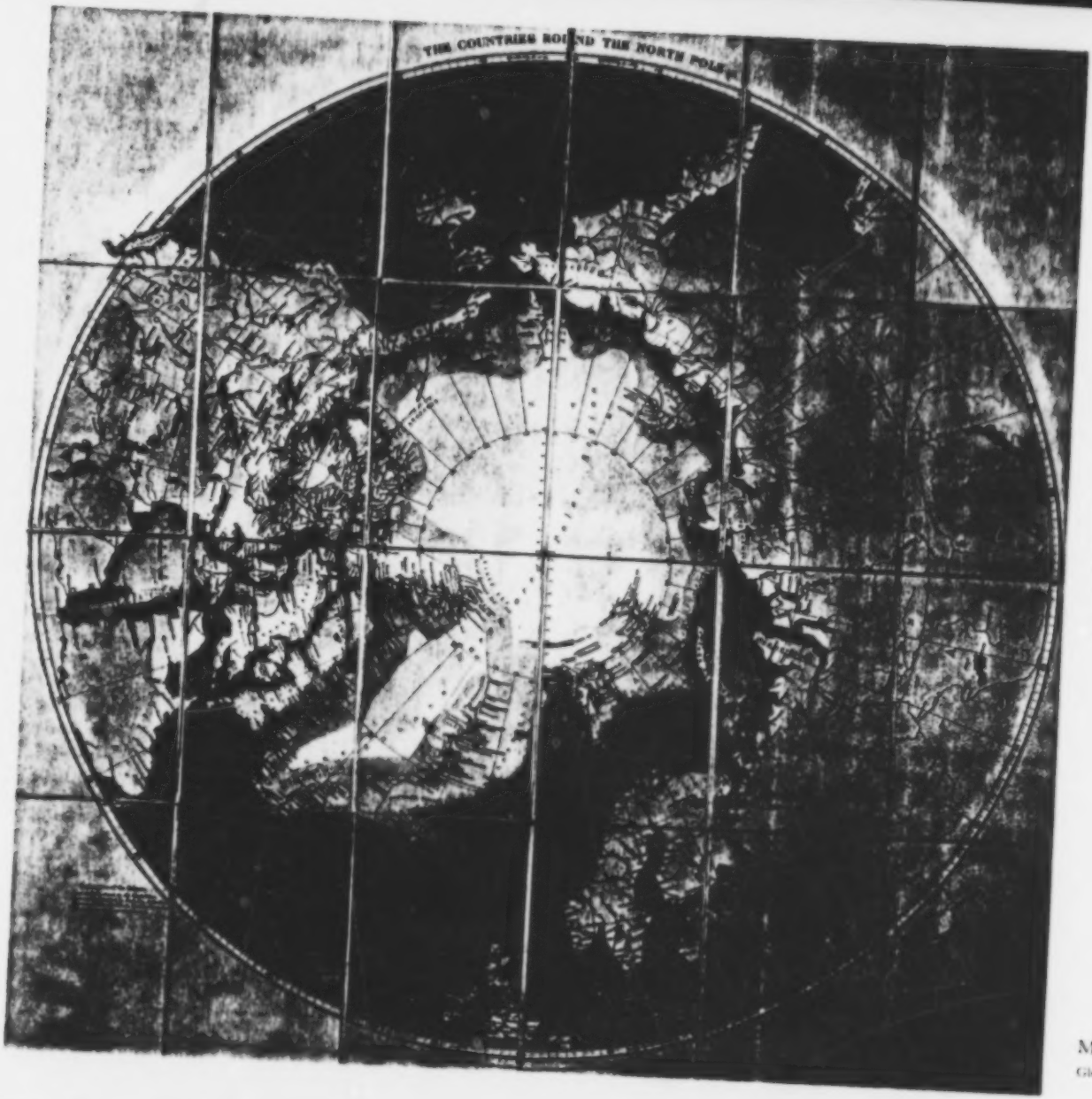

THE COUNTRIES ROUND THE NORTH POLE / London. Published by Edward Stanford, 55 Charing Cross, Dec. 2nd 1878. /

Mapmaker: Aaron Arrowsmith (1750 - 1823)
John Arrowsmith (1790 - 1873)
Edward Stanford (1827 - 1904)
Date: 1878
Size: 62 cm in diam. on sheet, 66 x 66 cm
Scale: RF [1:14,800,000]

The Arrowsmith firm mapped Canada from 1770 until 1873 when the firm was dissolved following John Arrowsmith's death. During this period, the most reliable, accurate and up-to-date maps often bore the Arrowsmith imprint. At the auction of the firm's assets, Edward Stanford acquired many of their most famous plates, among them the plate of the Arctic. This plate, first engraved in 1818 (Map #9), had been conscientiously reengraved to accommodate new information. Additional information was added in 1875 when Stanford adapted the plate to lithography, and more was added when the map was reissued in 1878. The out-line of the Arctic is almost complete. Only the area towards the pole is still undefined. Expeditions of discovery from " John Cabot 1497" to "Nordenskjold 1878" have been overprinted in red. Gradation of colour, made possible by the lithographic technique, is used to give additional information. A lessening in tone indicates the northern limit of trees and a lightening of blue gives location of major ice packs.

Map 14

Glenbow Library

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Part Three

Exploration and Settlement by Sea

While French and British forces dominated Canada's eastern development, the Pacific coast was explored by a variety of interested nations. Russia, Spain and later the United States all joined Britain in the investigation of these coastal waters.

Spain's claim was the oldest, since the area was part of the territory granted her by Pope Alexander VI in 1493. The gold-rich southern colonies occupied most of her attention, however, and early exploration in the north was slight. Her presence prevented other nations from exploring the area and consequently, mapmakers were forced to leave the area blank or speculate about probable outlines.

When Spain's power in the Pacific diminished, other nations became active. Russian interest in the north-western Pacific developed early in the eighteenth century. During his first voyage (1728), Vitus Bering explored the strait between Russia and Alaska, proving conclusively that North America was a separate continent. On a second voyage (1745), he charted the coastline of northern Alaska (Map #16). Further Russian expeditions firmly established her claims in the far north (Muller, Map #17; Kruzenshtern, Map #25). Europe became conscious of Russian activity when Delisle and Buache published their controversial de Fonte map (Map #6) in 1752. Prior to this date, Russian cartography had not been readily available to the west. Delisle's use of the material was not only unauthorized; it was incorrect. Muller issued a more accurate representation (Map #17) in 1754 and Russian discoveries began to appear on European maps.

Britain's involvement in the northern Pacific was a natural extension of her continental aspirations. If a trans-continental water route did exist, Britain wanted control of both its entrance and its exit. During his third voyage, Captain James Cook had orders to chart north Pacific waters and to search for a possible outlet to the Northwest Passage. He did not find the desired passage but his meticulous surveys did much to increase knowledge of the northern coast (Roberts, Map #20).

Rumours of Russian and British activity brought Spain out of her prolonged apathy. Several expeditions were mounted to survey and explore the northern waters. Voyages under Galiano, Valdes and Quadra coincided with those of Captain George Vancouver (Espinosa, Map #22; Vancouver, Map #21). The two expeditions worked together for a time and information was exchanged. The Nootka Convention (1790) concluded territorial negotiations between Spain and Britain and exploration continued by all nations. Russia was active in the far north while Britain dominated the middle latitudes. Spain's influence waned when the loss of her southern colonies displaced her from the Pacific coast.

Early in the nineteenth century, the United States established claims in the North Pacific. A series of treaties placed the international boundary between British and American holdings along the forty-ninth parallel, but increased American activity threatened these agreements (Burr, Map #26). To contain American expansion, permanent settlements were established; first at Victoria and later at New Westminster. The discovery of gold in the interior drastically increased the population and made reliable surveys mandatory. The Royal Engineers arrived in 1858 and within a remarkably short time had surveyed new transportation routes, built bridges and laid out new townships (Royal Engineers, Map #28). The gold rush created a large demand for maps and a lucrative trade developed in rapidly reproduced sketches of the gold fields (Patterson, Map #29; Millroy, Map #30). Gold miners and prospectors journeyed inland in large numbers, expanding knowledge of the interior of British Columbia and later the Yukon.

MARIS PACIFICI, / (quod vulgò Mar del Zur) / *cum regionibus circumiacentibus, insulisque in eodem / passim sparsis, novissima descriptio. /*

SPE ET / METV / GENIO ET INGENIO NO = / BILI DN. NICOLAO ROCCOXIO, / PATRICIO ANTVERPIENSI, / EIVSDEMQUE VRBIS SENATORI, / *Abrahamus Ortelius Regiae M^t^ geographius / lub. merito dedicabat. / 1589 /*

Mapmaker: Abraham Ortelius (1527 - 1598)
Date: 1589
Size: 33 x 48 cm
From: Ortelius, A. *Additamentum IV, Theatri Orbis Terrarum.* Antwerp: Plantin Press, 1589.

Map 15
Glenbow Library

Abraham Ortelius, a Flemish mapmaker, published the first modern uniform atlas in 1570. He began his career as a map illuminator, a profession which played an important role in sixteenth-century cartography. Colour was applied by hand and governed by strict convention. Although the colouring of this map is contemporary with its printing, such information is often difficult to verify. Because colouring was not part of the printing process, colour can be added at any stage of a map's life. Convention, style of illumination and type of colour applied must be carefully examined in order to determine the colouring date. Ortelius' map shows the Pacific Ocean after Magellan's discoveries, but before much additional exploration began. California is a peninsula and the Strait of Anian is named. Unexplored areas are filled with decoration. Magellan's ship, the Victoria, occupies much of the Southern Pacific and elaborate cartouches cover empty continents. Any remaining space is filled with a flowing italic script.

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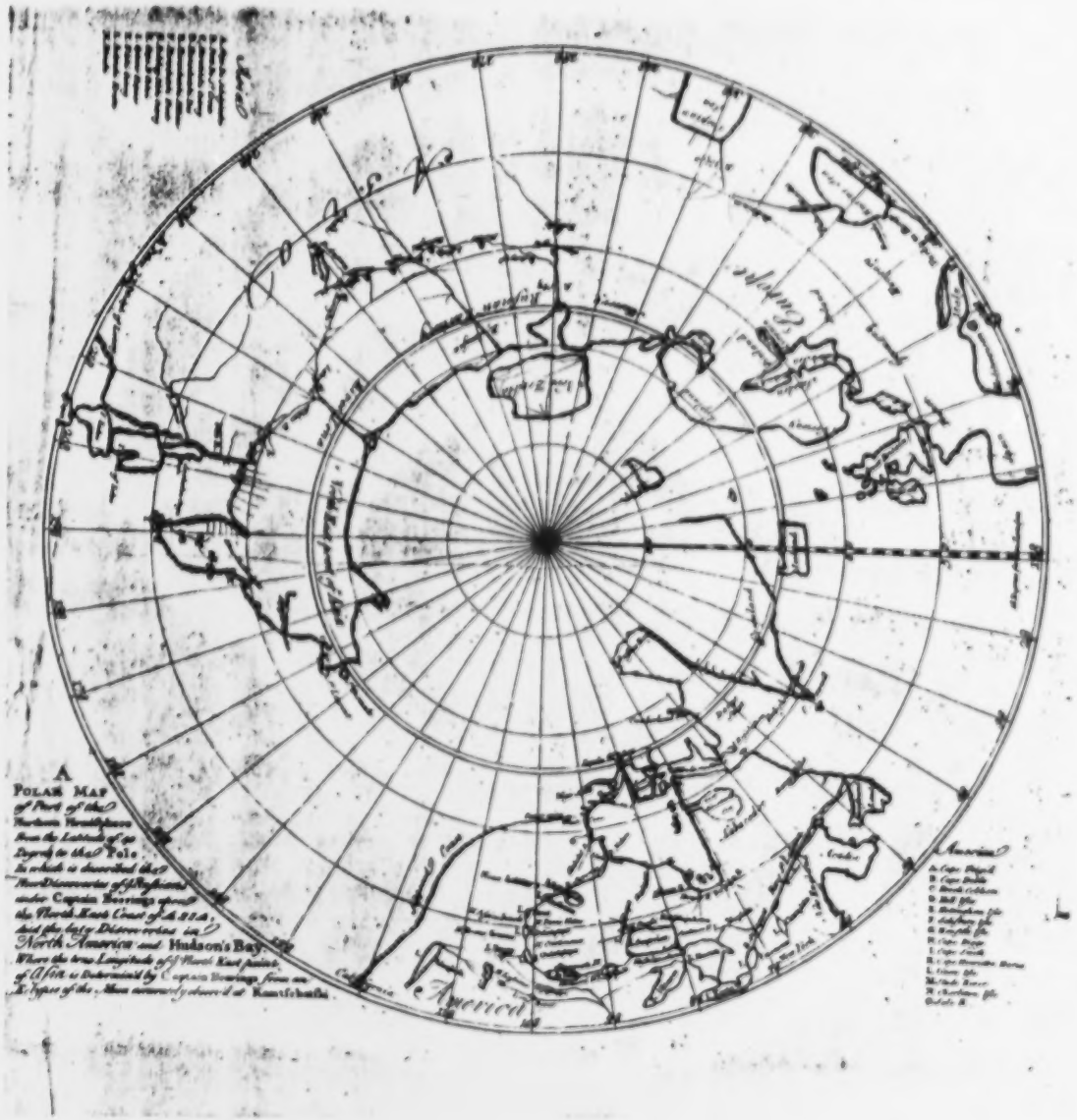
A / POLAR MAP / *of Part of the* / Northern Hemisphere / *From the Latitude of 40* / *Degrees to the Pole.* / *In which is described the* / *New Discoveries of ye Russians* / *under* Captain Beerings *upon* / *the North East Coast of ASIA,* / *And the late Discoveries in* / *North America and* Hudson's Bay. / *Where the true Longitude of ye North East point* / *of Asia is Determin'd by* Captain Beerings *from an* / *Eclypse of the Moon accurately observ'd at Kamtschatska.* /

Date: [1750?]
Size: 50 cm in diam on sheet 55 x 64 cm
Scale: RF [1:23,000,000]

At the turn of the eighteenth century, Russia began to take interest in her eastern coast. In 1728 an expedition under Vitus Bering was sent to do exploratory surveys. As information was not conclusive, Bering returned in 1745. By rounding the northern peninsula of Asia, Bering proved that North America was a separate continent although its dimensions and nature were still unknown. This map, drawn by an unknown cartographer, is an early example of Russian information appearing on English maps. Continents surrounding the pole are given in simplified outline except for North America. Here the Dobbs/La France map of 1744 (Map #32) has been incorporated. Dobbs firmly believed that Hudson Bay and the Pacific were linked so LaFrance constructed a map to bear out such theories. In including the information, however, the mapmaker had interjected a small note of caution. LaFrance's "Unknown Coast" had been changed to "Supposed Coast."



Map 16
UBC Library

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NOUVELLE CARTE / DES DECOUVERTES FAITES PAR DES / VAISSEAUX RUSSIENS AUX CÔTES INCONNUES / DE L'AMERIQUE SEPTENTRIONALE AVEC LES / PAIS ADIACENTS. / Dressée sur des memoires authentiques de ceux, / Qui ont assisté a ces decouvertes, et sur d'autres / Connoissances, dont on rend raison dans un memoire separé / *A St Petersbourg a l'Academie Imperiale / des Sciences, 1758.* /

Mapmaker: G F. Muller (1705 - 1783)
Date: 1758
Size: 45 x 62 cm
Scale: RF [1:19,750,000]
From: Muller, G F. *Sammlung Russische Geschichte* Vol. III. St. Petersburg, 1758

Map 17
Glenbow Library

When Delisle and Buache published their map in 1752 (Map #6), they claimed Russian knowledge for part of their projection. G F. Muller, a historian and geographer at the Russian Academy in St. Petersburg, drafted this map to correct European misconceptions of Russian discoveries. The map is as factual as possible although some spurious information still appears. The outline of Alaska is suggested and only areas explored are represented by solid lines. The de Fonte material presented by Delisle is dismissed with a small note: "Pretendue R de las Reyes de l'Admiral de Fonte en 1640 suivant Mr. Delisle." The "Riviere de l'Ouest" still appears. Rumours gathered from interior natives, together with the work of Jonathan Carver, an English traveller, substantiated belief in such a river.

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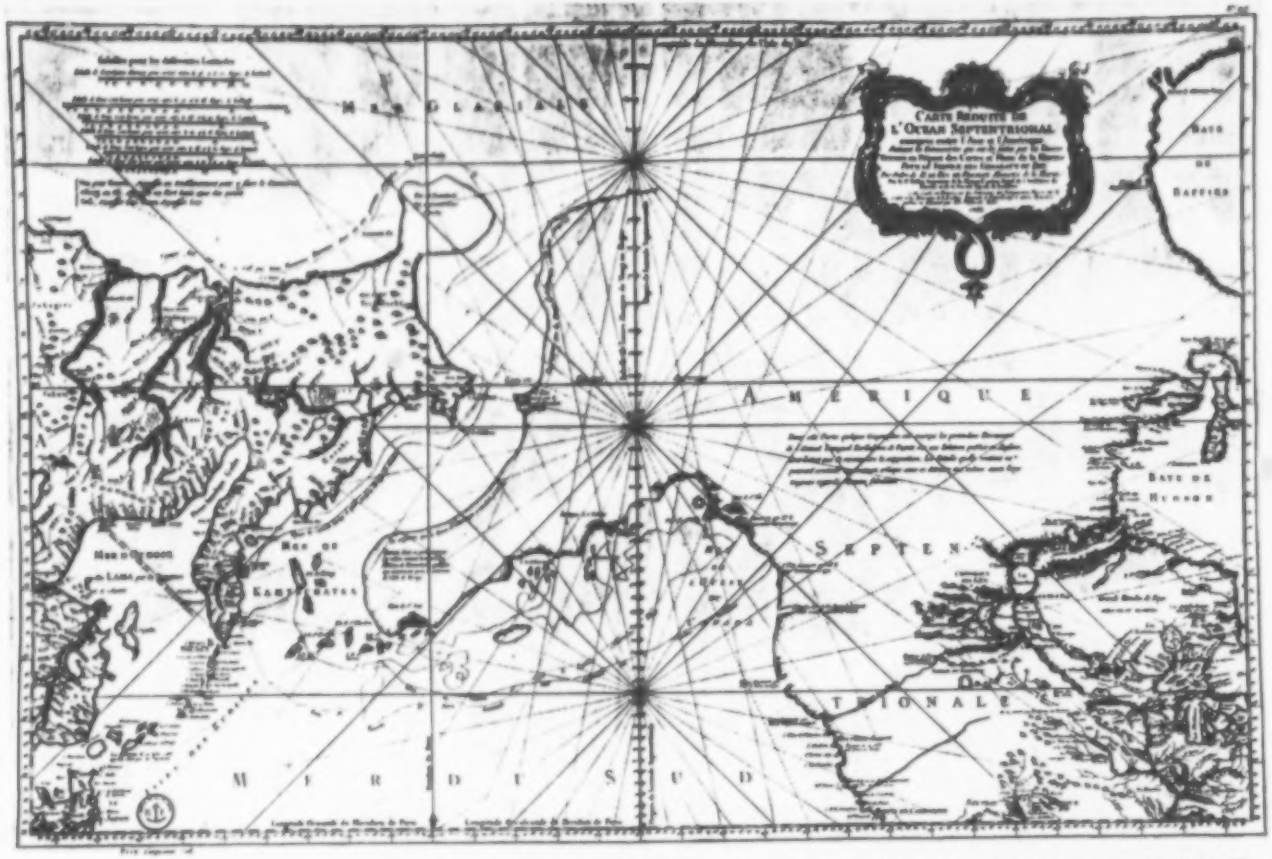
CARTE RÉDUITE DE / L'OCEAN SEPTENTRIONAL / compris entre l'Asie et l'Amérique / *Suivant les Découvertes qui ont été faites par les Russes* / Dressée au Dépost des Cartes et Plans de la Marine / *POUR LE SERVICE DES VAISSEAUX DU ROY.* / *Par Ordre de M LE DUC DE PRASLIN Ministre de la Marine* / Par le S^r Bellin Ingenieur de la Marine Censeur Royal de l'Académie de / Marine et de la Societé Royale de Londres. / *Cette carte est Dressée sur les Journaux des Navigateurs Russes sur la / Carte et les Memoires de / Academie Imperiale de Petersbourg et autres Memoires / publiés en Allemand par M. le Professeur Muller* / 1766 /

Seal: DEPOT DE LA MARINE R.F. /

Mapmaker: Jacques Nicolas Bellin (1703 – 1772)
Date: 1766
Size: 54 x 83 cm
Scale: RF [1:2,350,000]
From: *Hydrographie française* Versailles: L'Imprimerie du Department de la Marine, 1766



Map 18

This map by the French cartographer Jacques Nicolas Bellin was published at the height of the de Fonte controversy. Bellin gives his opinion on the subject in a note located at roughly 63 degrees north latitude. After careful consideration, Bellin decided that the de Fonte material did not withstand critical examination and was probably fabulous. Although drawn on a larger scale then Muller's 1758 map (Map #17), the information contained in this map is similar. Bellin used the same technique for suggesting Alaska but downplayed the information regarding the River of the West. The map was prepared for the French Depot de la Marine but also accompanied Bellin's pamphlet *Remarques sur la carte reduite* ... issued in 1766. After publication of the pamphlet the plate was sent to the Depot. The seal was added later as the R.F. stands for "Republique francaise". Alterations to plates were not unusual as copper is quite malleable and takes corrections or additions well.

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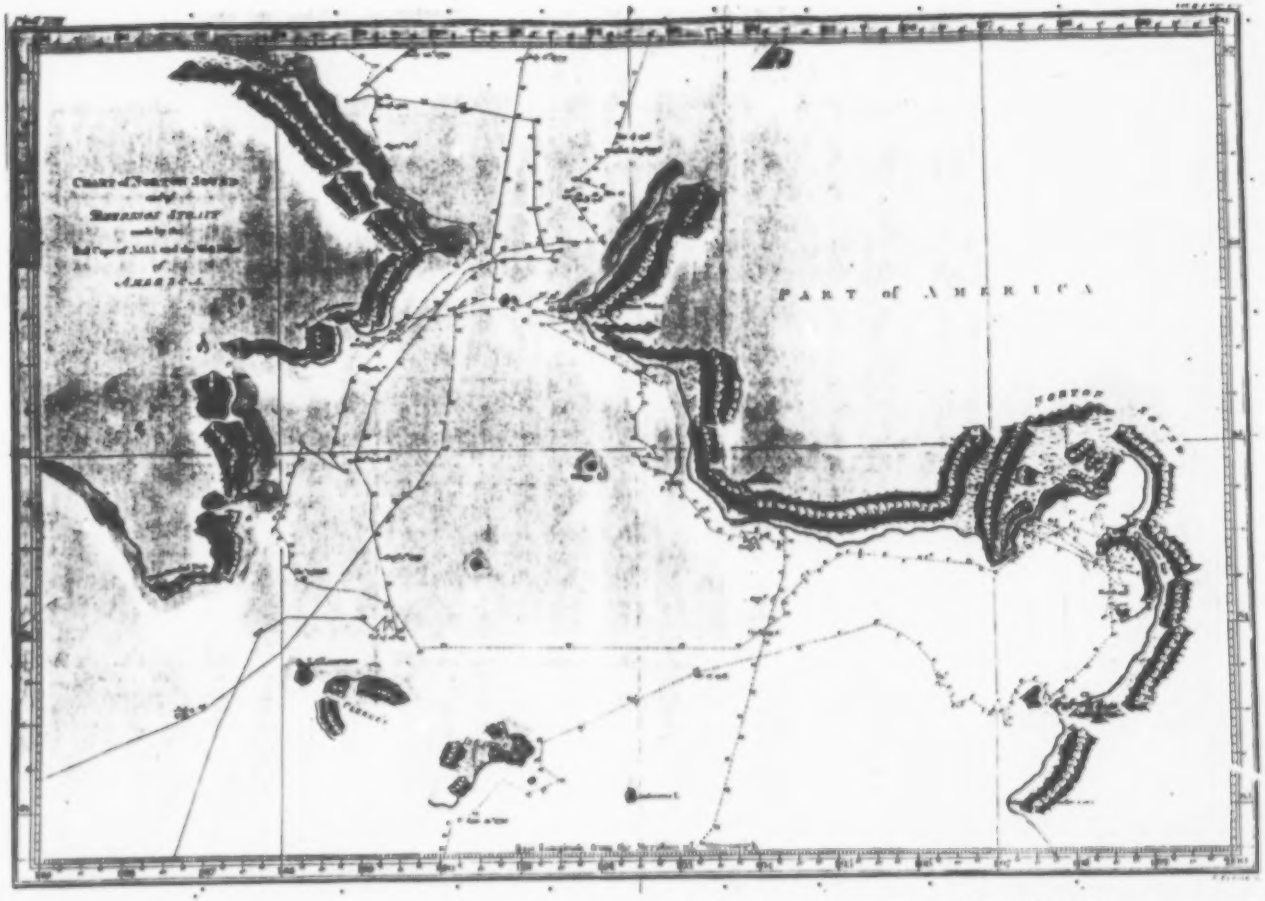

CHART of NORTON SOUND / *and of* / *BHERINGS STRAIT* / made by the / East Cape of ASIA and the West Point / *of* / *AMERICA* /
53 /

Date [1784]
Size 26 x 38 cm
Scale RF [1:1,950,000]
From Cook, J. *Voyage to the Pacific Ocean* Vol. II London, 1784

Map 19
Glendow Library

Although Vitus Bering proved that Asia and America were separate continents, he had not been able to survey the intervening strait. In the course of his third voyage, Captain James Cook came to the north Pacific to verify the relationship between the two continents. Charting of the strait began in 1778 and was continued by Captain Clerke after Cook's death in February 1779. It was the first precise survey of the area done with accurate instruments, and such scientific preoccupation is evident in this chart. Sounding of the water depth was done frequently and consistently, variations were noted and dates of information plotted. The map is carefully engraved with much close detail and no extraneous material is included. The lettering is functional and not prone to frivolity.

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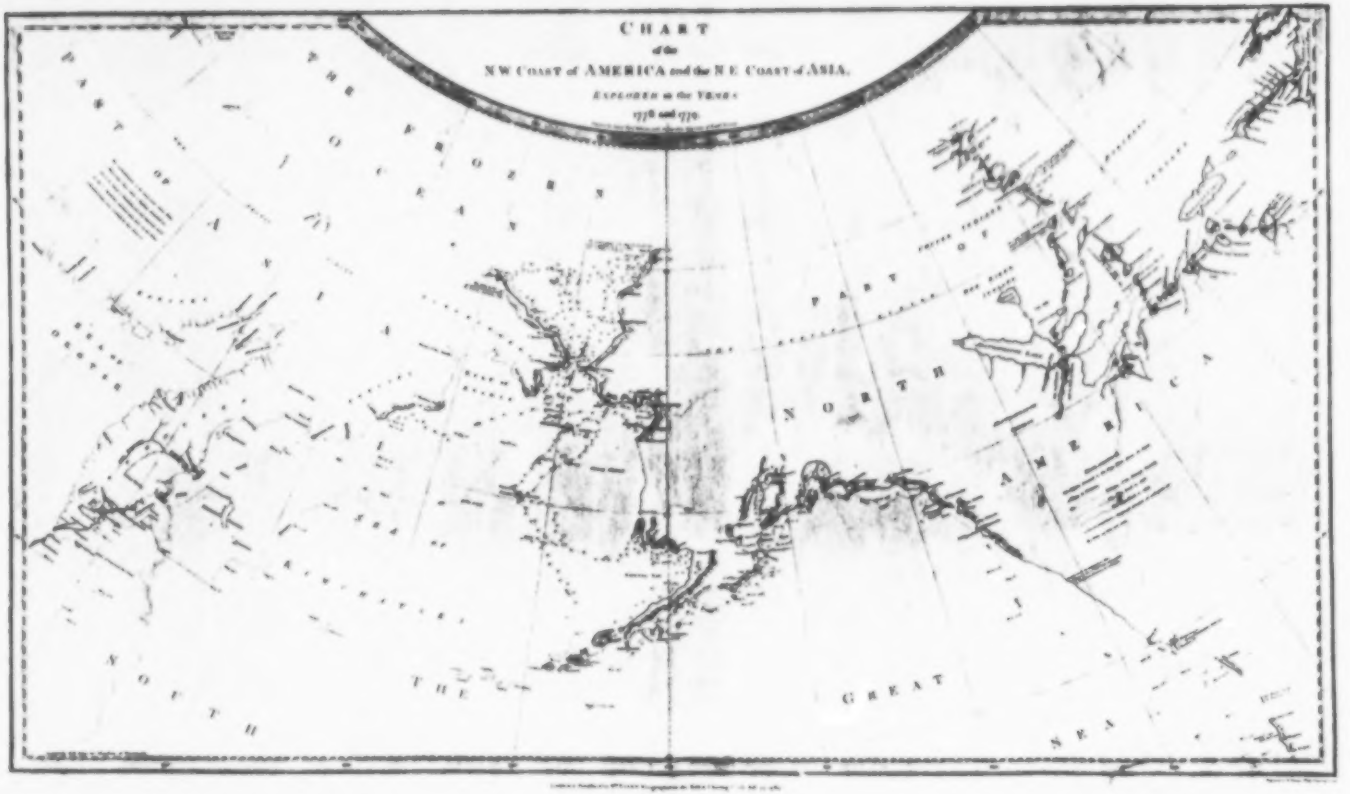
CHART / of the / N W COAST OF AMERICA and the N E. COAST of ASIA, / *EXPLORED* in the *YEARS* / 1778 and 1779. / *Prepared by* Lieu^t Henr^y Roberts, *under the immediate Inspection of* CAP^t COOK. /

LONDON. Published by W^m FADEN, Geographer to the KING, Charing-Cross, July 24. 1784. /

Engraved by W. Palmer, N^o 128, Chancery Lane /

Mapmaker: Henry Roberts
William Faden
(1750 - 1836)
Date: 1784
Size: 39 x 67 cm
Scale: RF
[1:8,850,000]



Map 20

Caledon Library

The official version of Captain Cook's third voyage was published in 1784 and included a chart drawn by Lieut. Henry Roberts. While preparing the chart, Roberts had access to the Hudson's Bay Company archives and discovered material submitted to them by Samuel Hearne (Map #33). As official policy could not accept this material (it destroyed all hope of a Northwest Passage in the middle latitudes), Roberts drafted this second map which was published by William Faden the same year. The map summarized all Cook's discoveries in the North Pacific. Only areas explored have been charted although probable coastlines are suggested. As Cook had been constrained by bad weather, landfalls along the Pacific coast were not frequent. Cook had hoped to settle the question of a western outlet for the Northwest Passage, but without conclusive information, a definite statement was not possible.

72 17 BEST COPY AVAILABLE 1773

CÔTE NORD-OUEST / DE / L'AMÉRIQUE / RECONNUE / par le Capt. VANCOUVER. / 3e. Partie / *depuis 45°30' de Latitude Sept.e / et 230°12' de Longitude / jusqu'à 52°15' de Lat.e et 232°40' de Long.e* / . . .

VOYAGE DE VANCOUVER N.° 6. /

Mapmaker: George Vancouver (1758 - 1798)
Date: [1799]
Size: 75 x 59 cm
Scale: RF [1:1,020,000]
From: *Atlas du voyage de Vancouver* ... Paris: De l'Imprimerie de la Republique. AN. VIII

Exploration along the Pacific coast was continued by Captain George Vancouver. Having served with Cook during the second and third voyages, Vancouver was well trained in the principles of surveying. In 1792 he circumnavigated and charted the large island which bears his name. This discovery he shared with the Spanish expedition under Galiano and Valdes. Parts of the coastline surveyed by his party were charted in fine detail, parts taken from Spanish maps appear in simple outline. Two methods of indicating height are used. Mountains on the mainland are represented in profile but relief representation on the island is done with hachures. The voyages of Vancouver were extremely popular and published in several editions. This map is taken from the French edition issued in 1799, a year after original publication. Such rapid diffusion of knowledge was not uncommon when no restrictions were placed upon material.

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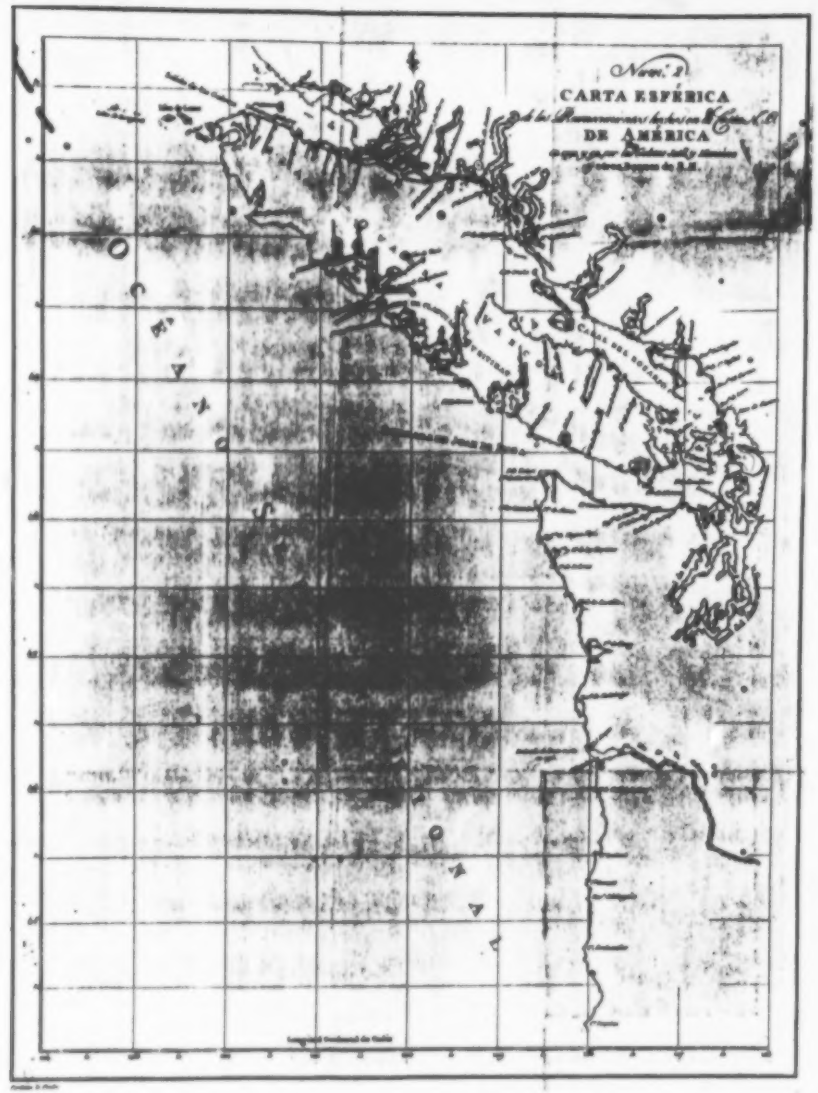
Map 21
UBC Library

Num.° 2 / **CARTE ESFÉRICA** */ de los Reconocimientos hechos en la Costa N.O. / DE AMERICA / en 1791. y 92. por las Goletas sutil y Mexicana /* y otros Buques de. S.M. /

Cardano lo Grabo /

Mapmaker:	Jose de Espinosa (1763 - 1815)
Date:	[1802]
Size:	46 x 34 cm
Scale:	RF [1:1,825,000]
From:	Espinosa y Tello, Jose. *Atlas Para El Viage de las Goletas Sutil y Mexicana al Reconocimiento al el Estrecho de Juan de Fuca en 1792.* Madrid: La Imprenta Real, 1802.

Although Spain laid ancient claim to Pacific waters, she had done little exploration north of California. Growing international interest in the north coast, however, rejuvenated Spanish activity and a settlement was established at Nootka in 1789. After confrontation with Britain over dominion of the area, Spain withdrew from the inlet. An expedition under Galiano and Valdes was sent to investigate new locations for settlement. They met with Vancouver in 1792 and exchanged information, but the British party soon left to explore farther north. The southern end of Vancouver Island is better defined than on Vancouver's map (Map #21), although the northeastern side, later explored by Vancouver is incomplete. Publication of Galiano and Valdes' information was surpassed by Vancouver's more popular presentation and only the Spanish names included on Vancouver's map have survived.



Map 22

UBC Library

76 BEST COPY AVAILABLE 77

Map 23
UBC Library

KAART / VAN HET NOORDOOSTELIJKE GEDEELTE / VAN / SIBERIE, / DE IJS-ZEE, DEN OOSTER-OCEAAN / EN DE NOORDWESTELIJKE KUST VAN / AMERIKA, / *Met aanwyzing van de vaart der Schepen, onder het / bevel van Kapitein BILLINGS, / Ontworpen door SARYTSCHEW / C. van Baarfel Sculps.* /

Mapmaker: G.A. Sarychev (1763 - 1831)
Date: [1808?]
Size: 37 x 73 cm
Scale: RF [1:1,900,000]
From: Sarychev, G.A. *Reis in het noordoostelijke Siberie* ... Amsterdam: J. Allart, 1808

Increased activity in the northern Pacific by French, Spanish and British forces caused Russia concern. In 1785 an expedition under Captain Billings was sent to survey, explore and substantiate Russian claims in the area. Gavrila Sarychev, as vice-admiral of the voyage, supervised the first detailed survey of the Aleutian chain and verified Cook's earlier survey of Bering Strait (Map #19). Various routes are marked on the map, but because of their concentrated nature, are hard to read. The map has been skillfully engraved and a delicate italic script gives it a touch of grace. Mountains drawn in profile, rather than hachures, suggest height. Little development in accurate relief representation had occurred since Gastaldi (Map #1) and Delisle (Map #8). Precise representation of height required numerous measurements which early marine surveys were not equipped or prepared to do.

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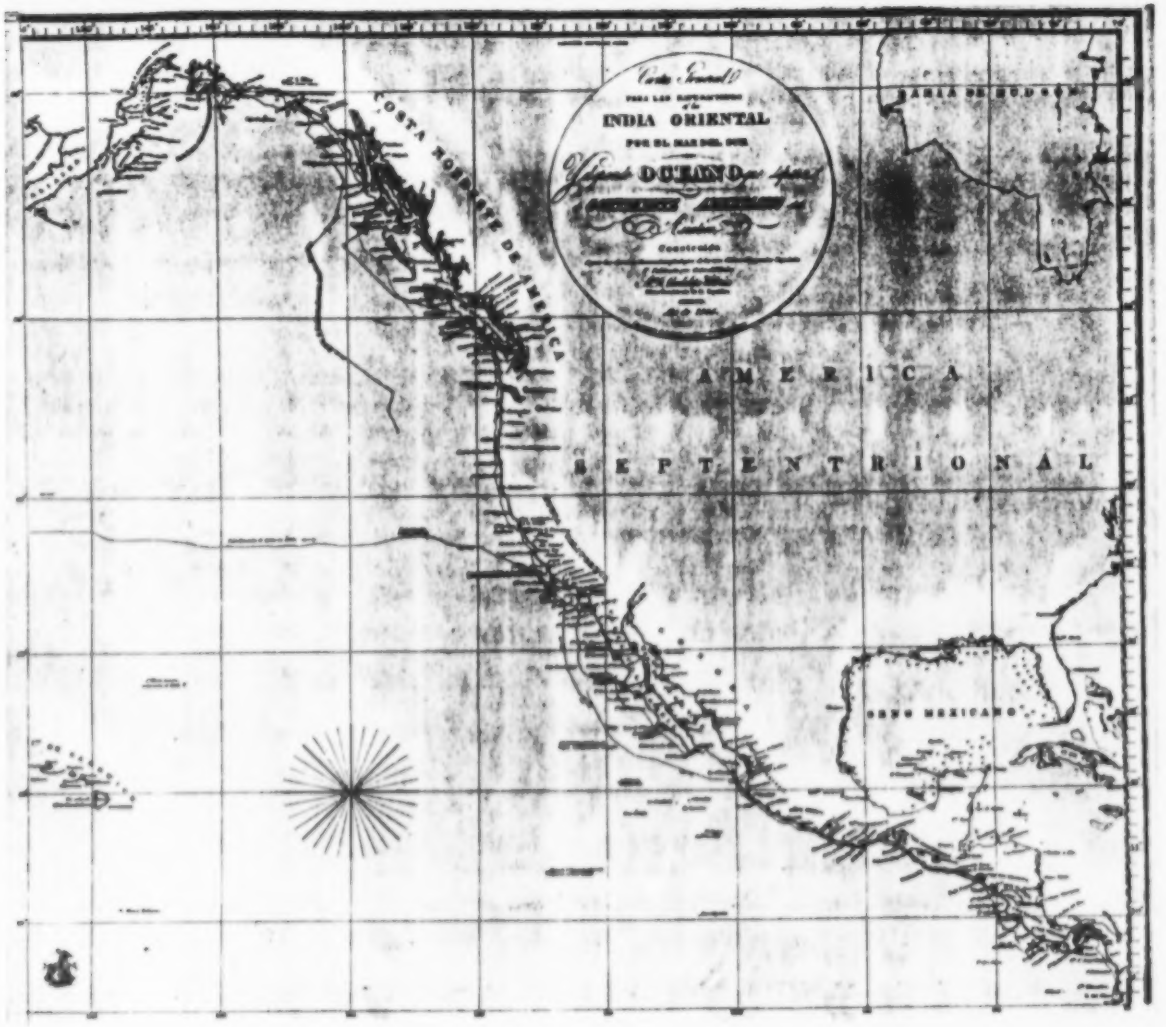
Carta General / PARA LAS NAVEGACIONES / *a la* / INDIA ORIENTAL / POR EL MAR DEL SUR / *Y el grande* OCEANO *que separa* / *el CONTINENTE AMERICANO del* / *Asiatico,* / Construida / *Segun las derrotas, Observaciones y trabajos de los mas Celebres Navegantes Españoles* / *Y Publicada por Orden del Exmo* / *Sr. D. Guadalupe Victoria* / Primer Presidente de la Republica / MEXICO. *AÑO de 1825.* / *Los numeros de la Sonda son brazas de 6 pies de Burgos.* /

Date: 1825
Size: 61 x 69 cm
Scale: RF [1:11,500,000]

Spanish interest in the northwest coast continued after her influence decreased. Areas in the Pacific became more important as her eastern possessions were slowly eroded. Mexico began to agitate for independence in 1810 and Florida went to the new American nation in 1819. Spanish expeditions northward after 1792 are marked on this map but little interior detail is given. Even in California few inland expeditions had been made. Without inland claims, Spain's existence on the coast was tenuous and eventually led to her displacement from the North American continent. The map is large and open. Residues of a more elaborate age remain in the simple circular cartouche, the functional compass rose and the small coat of arms in the lower left hand corner of the map.



Map 24
Glenbow Library

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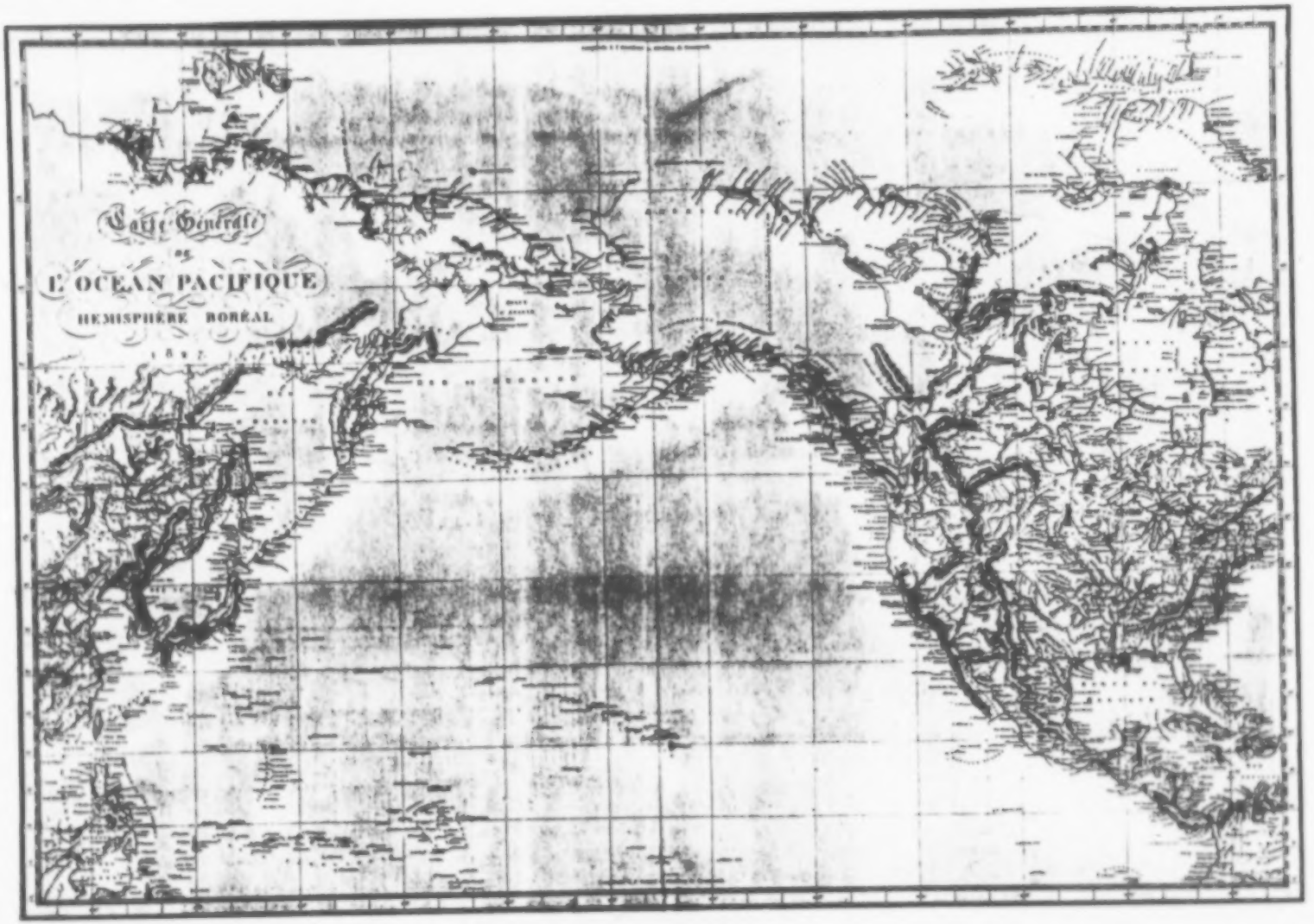

Map 25
UBC Library

BEST COPY AVAILABLE

Carte Générale / *DE* / L'OCEAN PACIFIQUE / HEMISPHÈRE BORÉAL / 1827. / *Corrigé jusqu'en 1835.* /

Mapmaker: Ivan F. Kruzenshtern (1770 - 1846)
Date: 1835
Size: 61 x 88 cm
Scale: RF [1:15,500,000]
From: Kruzenshtern, Ivan F. *Atlas de l'ocean pacifique.* Grave par S. Froloff. St. Petersburgh, 1827.

Russian claims in the north of America were finally ratified by treaty in 1825. This new border crosses the virtually unexplored terrain of northern North America and contrasts strongly with the detailed representation elsewhere. Kruzenshtern was a Russian admiral and a trained marine cartographer. Unlike the Spanish, however, he was interested in interiors as well as coastlines. His map encompasses all that was then known about areas bounded by the Pacific. In North America, a completed Pacific coastline is given, interior discoveries appear and an expanding Arctic shoreline is noted. Hachures suggest a central chain of mountains and river systems are given in great detail. A faint penciled grid appears over the Gulf of Mexico and Hawaii. Such grid systems were used by later mapmakers to guarantee an accurate representation when areas were redrawn at different scales.

Detail of Map 25

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OREGON TERRITORY.

Entered according to act of Congress in the year 1836 by Illman & Pilbrow in the Clerk's office of the District Court for the Southern District of New York.

Illman & Pilbrow N.

48.

Mapmaker:	David Burr (1803 – 1875)
Date:	1836
Size:	26 x 30 cm
Scale:	RF [1:7,200,000]
From:	Burr, David. *A New Universal Atlas.* New York: D.S. Stone; 1836.

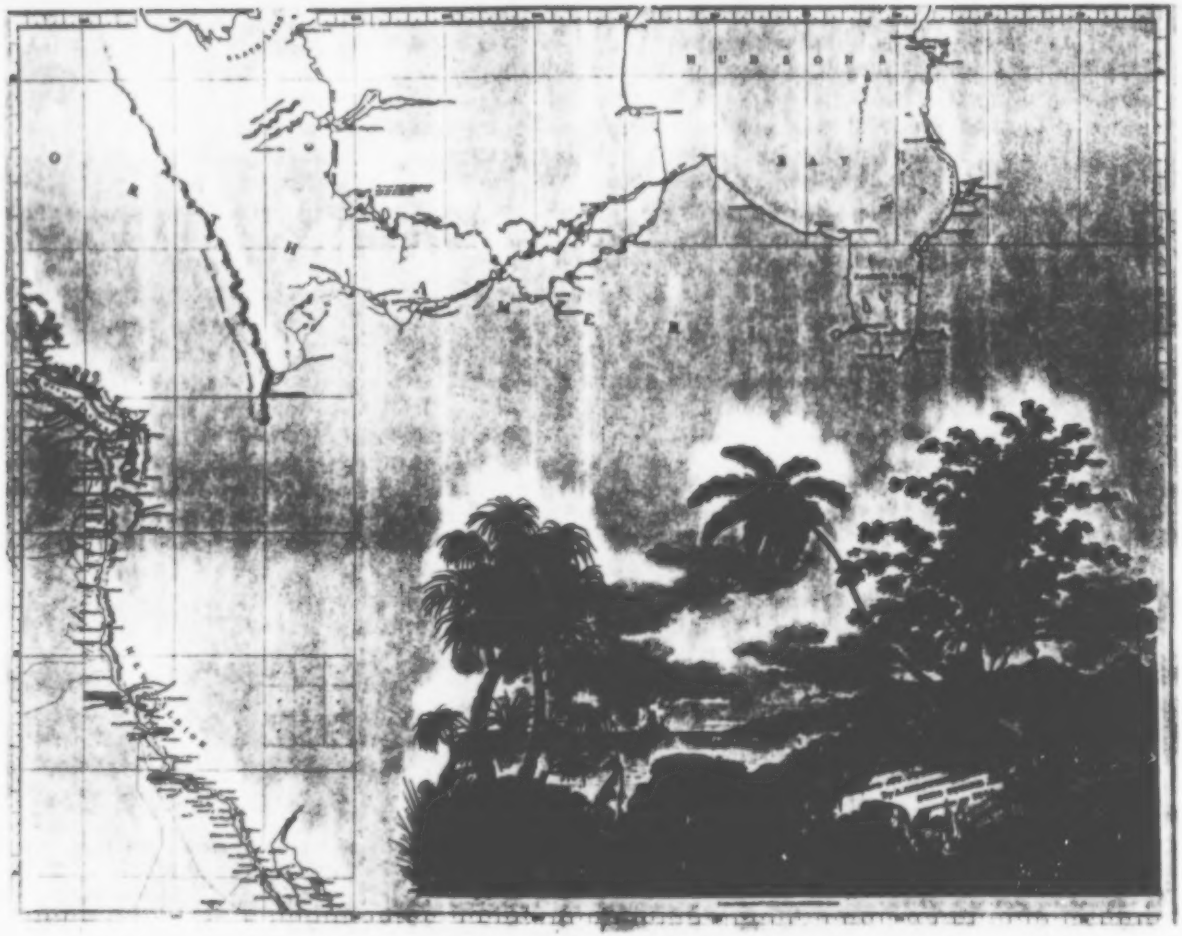
Map 26

Oregon Territory was the American name for the area between the British-American border in British Columbia and the Spanish-American border in California. Because boundary treaties between the United States and Britain had not reached conclusive agreement, interpretations of the territory differed. Aggressive American expansion and the famous "Fifty-four forty or fight" campaign reopened border discussions. In 1846 final negotiations extended the forty-ninth parallel to the sea. This map shows one American viewpoint prior to the settlement. The forty-ninth parallel is inscribed as far as the Rocky Mountains while the fifty-second parallel is used west of this point. The interior of British Columbia is still undefined and very few settlements appear north of the Columbia River.

CHART OF THE / PACIFIC OCEAN / Drawn from a great number of / *PRINTED AND MS. JOURNALS* / By A. ARROWSMITH, Geographer, / SOHO SQUARE, LONDON. / ADDITIONS TO 1844. /

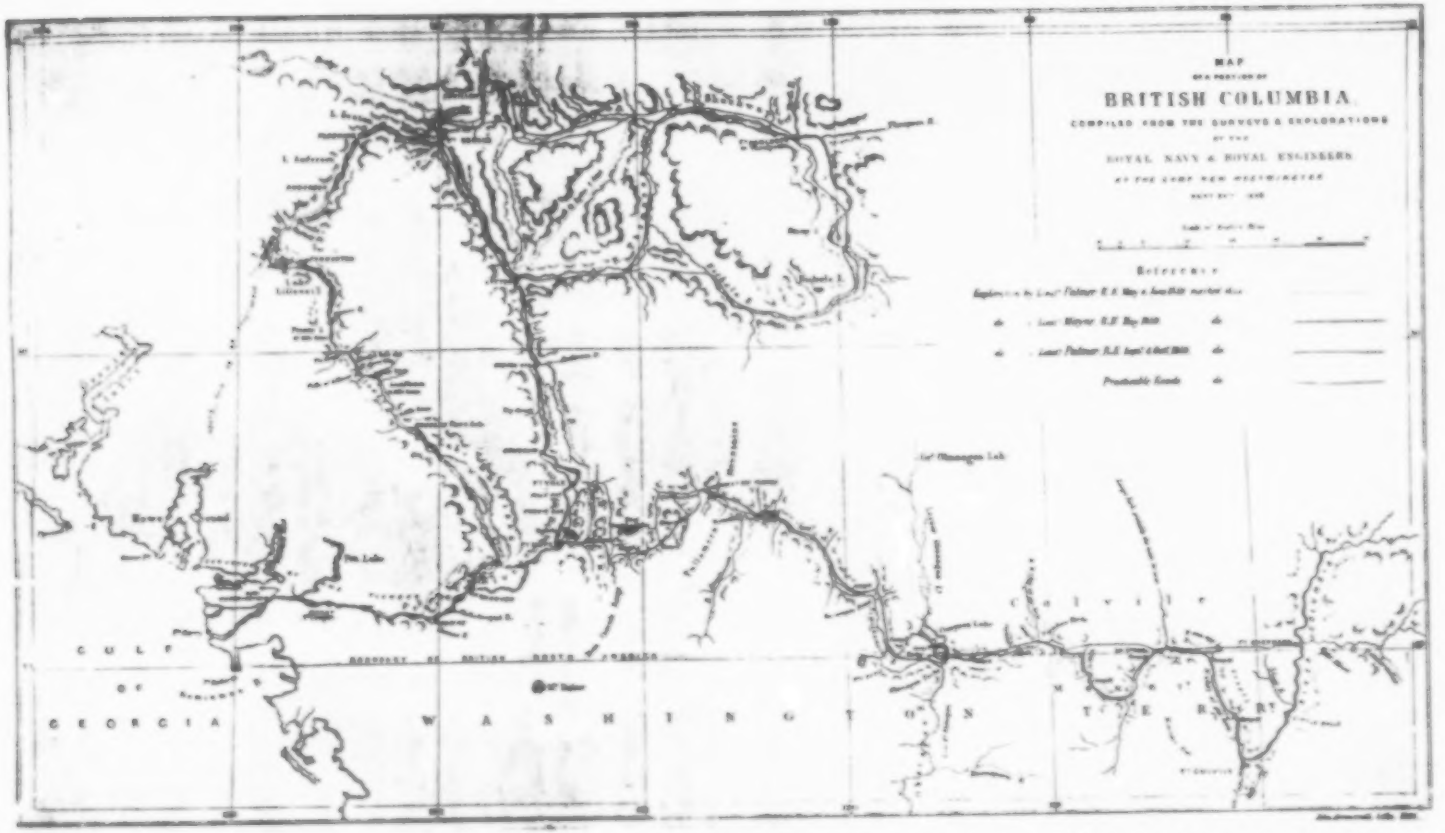
London: *Published Jan. 1844, by J. Arrowsmith N° 10 Soho Square.* /

Mapmaker	Aaron Arrowsmith (1750 - 1823) John Arrowsmith (1790 - 1873)
Date	1844
Size	64 x 79 cm
Scale	RF [1:2,600,000]



Map 27
UBC Library

John Arrowsmith assumed control of the Arrowsmith firm in 1839. Like his uncle Aaron, he attempted to keep his plates current through constant revision. This map is an exception as it lacks Mackenzie's routes to both the Arctic and Pacific Oceans. As the Arrowsmith firm first introduced this material in 1795, one would expect it to appear on this plate. The map is one of a series, however, dealing with the Pacific Ocean which might explain its lack of interior detail. Nine sheets were joined to give a large comprehensive map at a fairly good scale (see Arrowsmith, Map #35 for an example of size when sheets were joined). Sheet sequence, title and imprint information are printed on this introductory section. The large cartouche which dominates the map served to balance the whole when all sheets were properly arranged.



Map 28

Gleeson Library

MAP / OF A PORTION OF / BRITISH COLUMBIA, / COMPILED FROM THE SURVEYS & EXPLORATIONS / *OF THE* / ROYAL NAVY & ROYAL ENGINEERS, / *AT THE CAMP NEW WESTMINSTER* / NOV^R 24^TH 1859. /

John Arrowsmith, Litho 1860. /

Date: 1860
Size: 52 x 63 cm
Scale: RF [1:1,030,000]
From: *British Parliamentary Papers*, 1860 Volume XLIV

In 1858 the small colony of Victoria on Vancouver Island was one of a few settlements in the Pacific northwest. Several years later, settlements were located along the Fraser River from Vancouver to the Interior. Discovery of gold brought new settlers as well as prospectors and new towns were needed to accommodate the increased population. A detachment of Royal Engineers arrived in 1858 and not only surveyed the new townships, but also built permanent roads and bridges. The work they did was comprehensive and detailed as this map of southern British Columbia illustrates. The areas along the Lillooet and Fraser Rivers are outlined and suggestions for possible roads given. Okanagan Lake is not shown but the areas along the forty-ninth parallel are better delineated. Border surveys and the need for a northern transportation route to replace the Columbia River route generated interest in this area.

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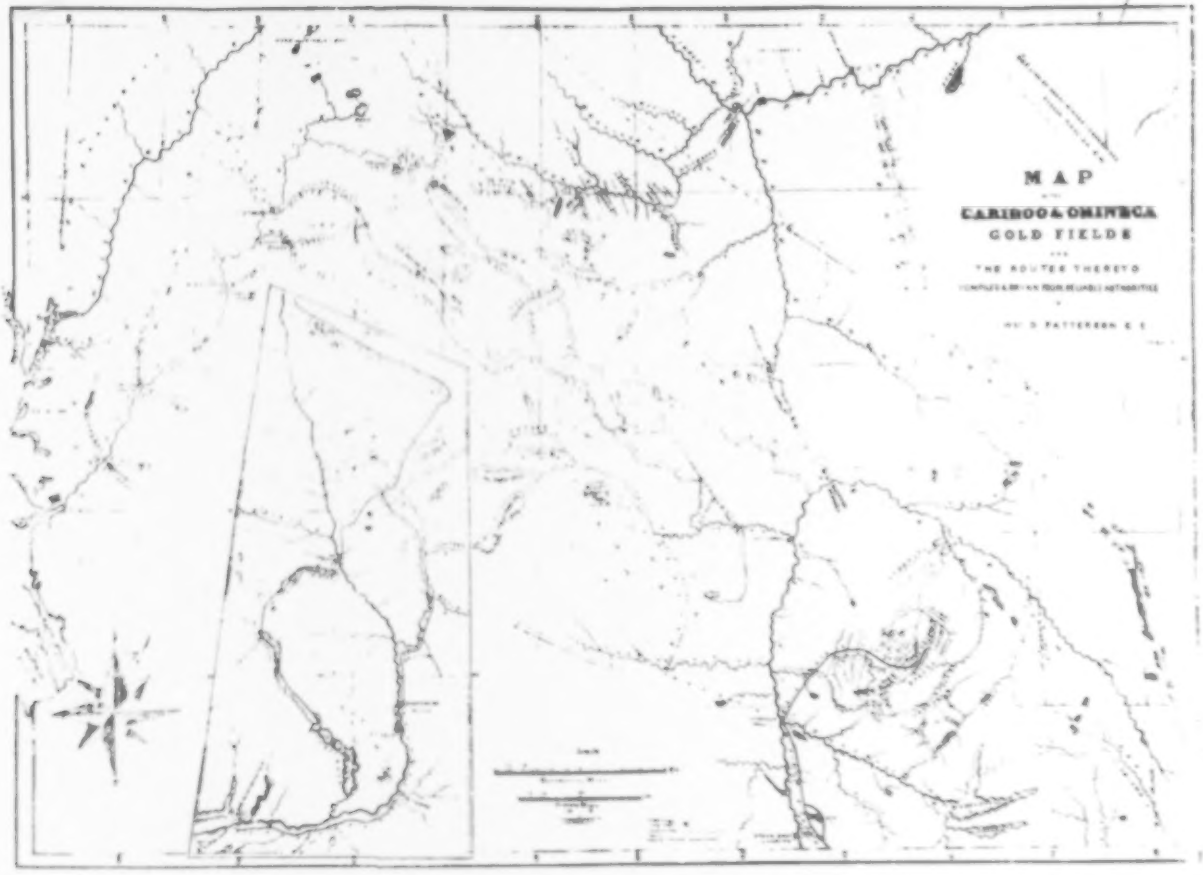
MAP / OF THE / CARIBOO & OMINECA / GOLD FIELDS / AND / THE ROUTES THERETO / COMPILED & DRAWN FROM / RELIABLE AUTHORITIES / BY / WM D PATTERSON C E / LITHO E W GRETNCE

Mapmaker: William Patterson
Date: [1870]
Size: 36 x 51 cm
Scale: RF [1:1,500,521]



Map 29

The influx of miners and prospectors created a demand for adequate maps of the gold fields. Maps similar to William Patterson's were drawn by hand giving details about transportation, land features and occasionally weather. They could be reproduced quickly by lithographic as the design was traced rather than engraved on the printing surface. On this map, Hudson's Bay Company forts are marked and various communications systems noted. Telegraph lines were installed in 1865 and appear along with roads and bridges. The map is folded and protected by cardboard so it could be carried in a pocket. Additional information included on the covering boards produced some of the earliest Pacific travel guides. Businesses were advertised, mileages noted and other useful information given.

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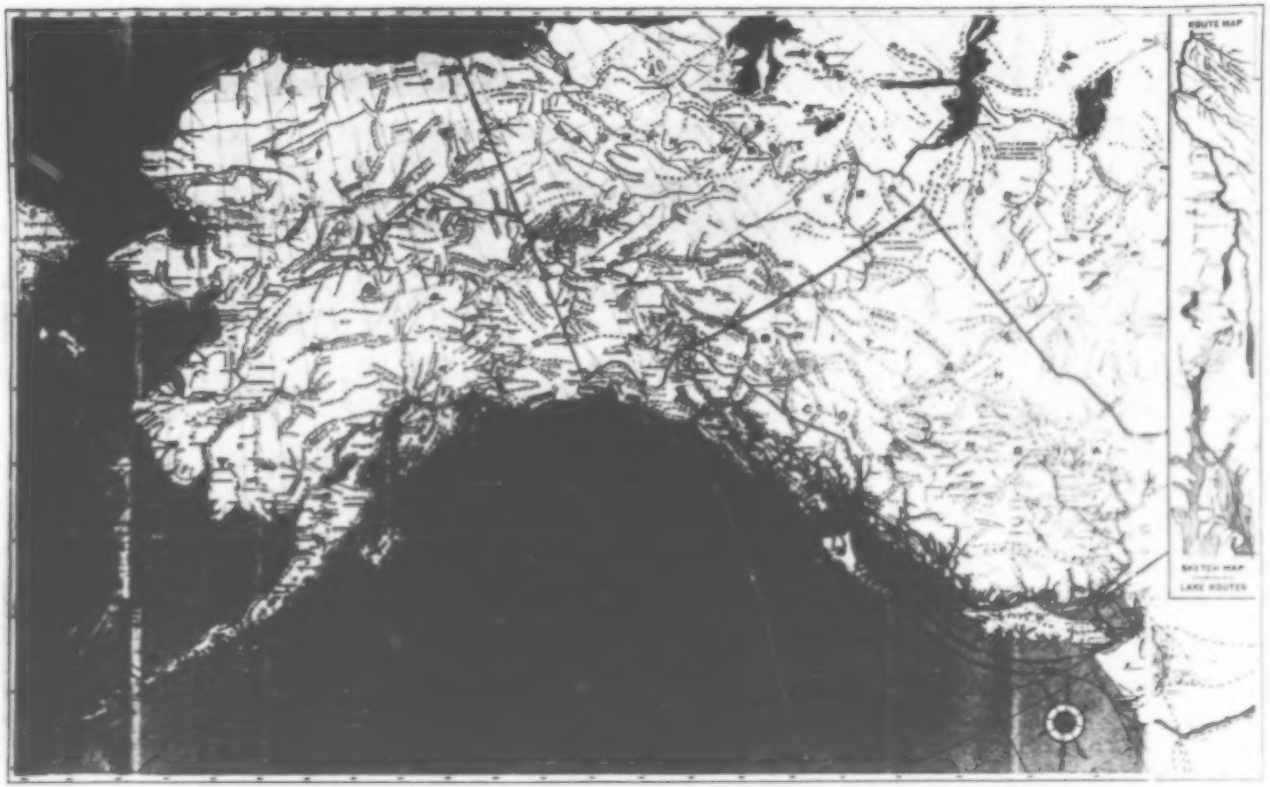

THE / "MAP OF MAPS" / ALASKA / AND / BRITISH COLUMBIA / SHOWING THE / YUKON, CARIBOO / CASSIAR, / WITH A PORTION OF THE / KOOTENAY GOLD FIELDS / *Entered According to Act of Congress, in the / year 1898, by J.J. Millon, in the office of the / Librarian of Congress in Washington.*

Mapmaker: J.J. Millon
Date: 1898
Size: 57 x 93 cm
Scale: RF [1:4,000,000]

Map 30

The gold rush brought many people to the west coast, most of whom were unprepared to deal with the terrain. Maps appeared which not only gave directions to the gold fields but also included such information as "Outfit for One Man for One Year." The information was, of course, accompanied by addresses where such supplies could be obtained. Printing of detail was easier with lithography and complex maps were quickly produced. On this map boundaries, transportation routes, mineral symbols, mileage and editorial comments all appear. Nautical miles from a variety of transfer points are also given. These routes are decorated with diminutive ships reminiscent of the earlier days of decorative cartography.

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Part Four

Exploration Overland

Overland exploration of the Canadian west can be divided into three major periods, all important and all marked by some degree of conflict. Each period resulted from a different set of aims and hence each generated different types of maps.

As elsewhere, initial mapping of the interior was done by inspiration. Wytfliet (Map #31) invented the material he depicted in 1597, and nearly two centuries later, speculation about the shape and size of the interior regions still occured (Dobbs/LaFrance, Map #32). The first concrete information was gathered by fur traders, who, in their search for more pelts, initiated exploration. But their primary concern was fur; they lacked the ability to construct maps and much of their information was never recorded.

Although they established some supply posts, the independent French traders preferred to deal directly with the Indians, carrying their custom into Indian territory. Such initiative soon reduced the number of furs arriving into Hudson's Bay posts. To maintain supplies, the Hudson's Bay Company was forced to adopt similar methods and increased competition over dwindling resources introduced the second period of western expansion. To sustain a growing network of trading posts, efficient supply routes and adequate maps were necessary. The traders of this period were also explorers interested in geographical relationships between physical features. Maps by Hearne (Map #33) and Mackenzie (Map #34) show an increased concern with reliable measurement and the maps drawn by David Thompson (Arrowsmith, Map #35) were amazingly accurate, considering his early instruments.

The explorations of Hearne, Mackenzie and Thompson proved conclusively that no major water route drained westward across North America and interest in exploration waned. In 1813 Lord Selkirk established the first agricultural colony in western Canada on lands granted to him by the Hudson's Bay Company. This land, over which the Company had no jurisdiction, was located on the Red River in the heart of the North West Company trading network. Neither company particularly wanted settlement in the west but the Hudson's Bay Company hoped the Red River Settlement would block North West Company trade (Mackenzie, Map #36). The settlement failed, but the concept of agricultural development survived. Although all the major trading routes and most drainage systems had previously been mapped, little was known about the areas off these routes. Surveys were funded by both the British and Canadian governments to discover more about the territory and to ascertain its suitability for farming. These surveys initiated the final stage of western exploration.

The day of the individual explorer was over. The government surveys were substantially manned and carried the latest scientific equipment. The Canadian government funded the expedition led by Henry Hind and Simon Dawson in 1859. Hind (Map #38), a geologist, was in charge of exploratory work and Dawson (Map #39), a surveyor, managed the technical section. Captain John Palliser (Map #41) led the expedition funded by the British government and his information did much to influence development in the west. These surveys and those which followed, collected specialized information about the terrain as well as geographical material. Knowledge about landforms, weather patterns, rock formations and soil deposits was needed to build efficient transportation systems. Rail and road routes soon appeared (Stevens, Map #42; Mullan/Freyhold, Map #43) and these transportation systems completed discovery of the west.

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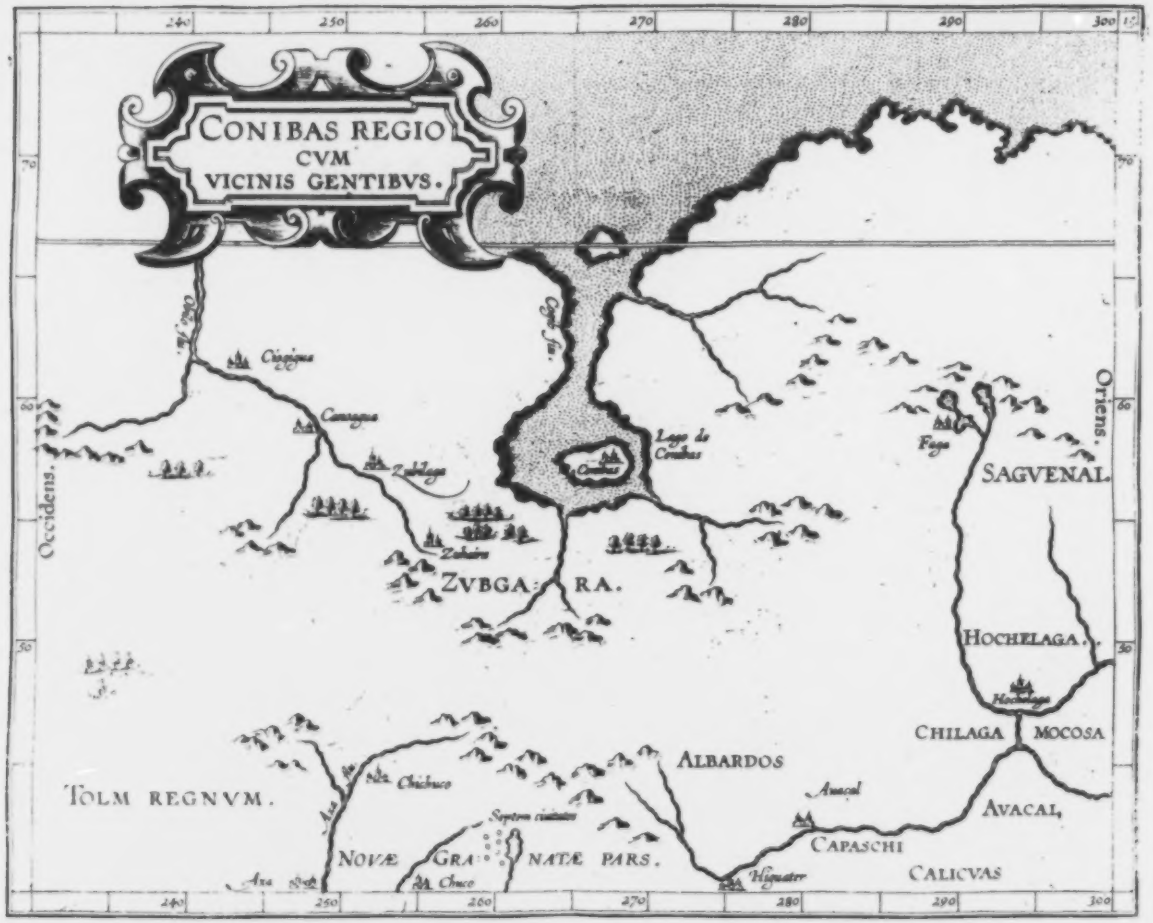

CONIBAS REGIO / CVM / VICINIS GENTIBVS. /

15 /

Mapmaker: Cornelius Wytfliet (d. 1597)
Date: [1597]
Size: 21 x 26 cm
Scale: RF [1:19,000,000]
From: Wytfliet, C. *Descriptionis Ptolemaicae Augmentum* . . . Lovanii: Typis Iohannis Bogard, AD 1597.

Map 31

Glenbow Library

Cornelius Wytfliet was an amatuer geographer living at the time of Gastaldi and Zaltieri. His only publication was the *Descriptionis Ptolemaicae Augmentum* which dealt solely with North America. Planned as a supplement to ancient Ptolemaic atlases, the work illustrated Wytfliet's conception of the new world. The map represents the interior regions and Wytfliet, needing a map to link representations of east and west coasts, invented his information. The large inland lake, the Lago de Conibas, is probably taken from a Mercator map. Several mythical towns appear, as well as the actual town of Hochelaga. Inclusion of real features gave credibility to other information and linked this sheet with a previous map of New France. The slight overlap of area which included Hochelaga added continuity, making acceptance of material more likely.

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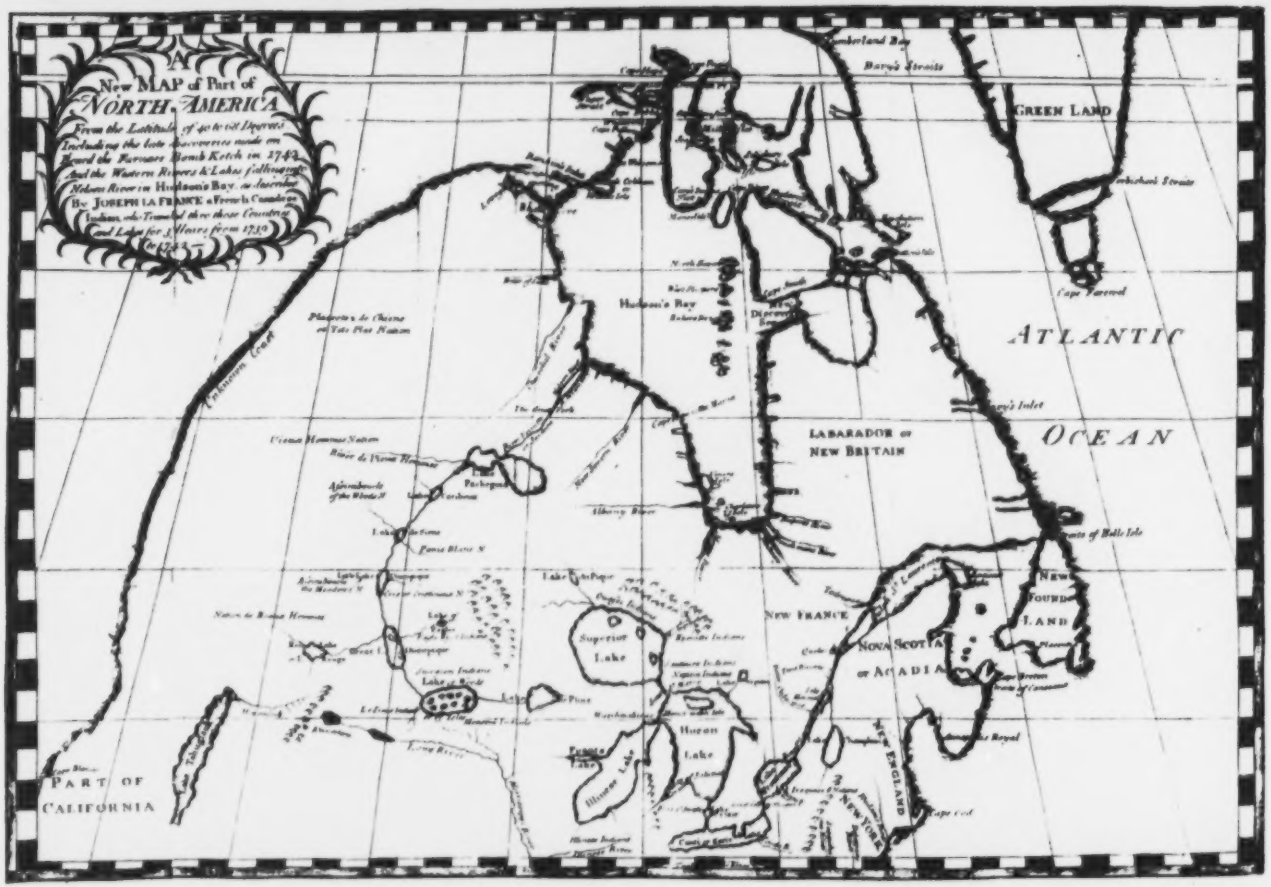
A NEW MAP of Part of / *NORTH AMERICA* / *From the Latitude of 40 to 68 Degrees.* / *Including the late discoveries made on / Board the Furnace Bomb Ketch in 1742.* / *And the Western Rivers & Lakes falling into / Nelson River or Hudson's Bay. as described / By* / JOSEPH LA FRANCE a French / Canadese / Indian, who *Travailed Thro those Countries / and Lakes for 5 Years from 1739 / to 1744.*

Mapmaker: Arthur Dobbs (1689 – 1765) / Joseph LaFrance (c. 1707 – 1739)
Date: [1744]
Size: 82 x 46 cm
Scale: RE [1:9,750,000]
From: Dobbs, Arthur. *An Account of the Countries Adjoining to Hudson's Bay.* London: Printed for J. Robinson, at the Golden Lion in Ludgate Street, 1744


A New MAP of Part of NORTH AMERICA From the Latitude of 40 to 68 Degrees Including the late Discoveries made on Board the Furnace Bomb Ketch in 1742 And the Western Rivers & Lakes falling into Nelsons River in Hudson's Bay. as described By JOSEPH LA FRANCE a French Canadese Indian, who Travailed thro those Countries and Lakes for 5 Years from 1739 to 1744
Cumberland Bay
Davis's Streits
GREEN LAND
Hudson's Bay
ATLANTIC
OCEAN
LABARADOR or NEW BRITAIN
Cape Farewel
Baccalaos or Bacalaos
NEW FRANCE
NOVA SCOTIA or ACADIA
NEW FOUND LAND
Superiour Lake
Huron Lake
Illinois Lake
PART OF CALIFORNIA
NEW ENGLAND
NEW YORK

Map 32
UBC Library

Administrators of the Hudson's Bay Company must have dreaded the name of Arthur Dobbs. Dobbs was a wealthy Irishman who greatly resented the Company's monopoly in Hudson Bay. He also firmly believed in a Northwest Passage and claimed that the Company discouraged exploration in order to protect its monopoly. In 1744, Dobbs issued a pamphlet denouncing Hudson's Bay Company policy and outlining his theories of a Northwest Passage. The pamphlet was based on the fictitious journals of Admiral de Fonte and was accompanied by a map by Joseph LaFrance, a young French-Canadian Indian who travelled from the Great Lakes to Hudson Bay in 1739. The map was constructed after extensive interviews and drawn more to satisfy Dobbs than to accurately represent the territory involved. The western shore of Hudson Bay drains into a large water body which gradually becomes the Pacific. A vague outline of the Lake Winnipeg drainage system also appears. Rumours of these waters came from French fur traders and from Indians trading into Hudson Bay.

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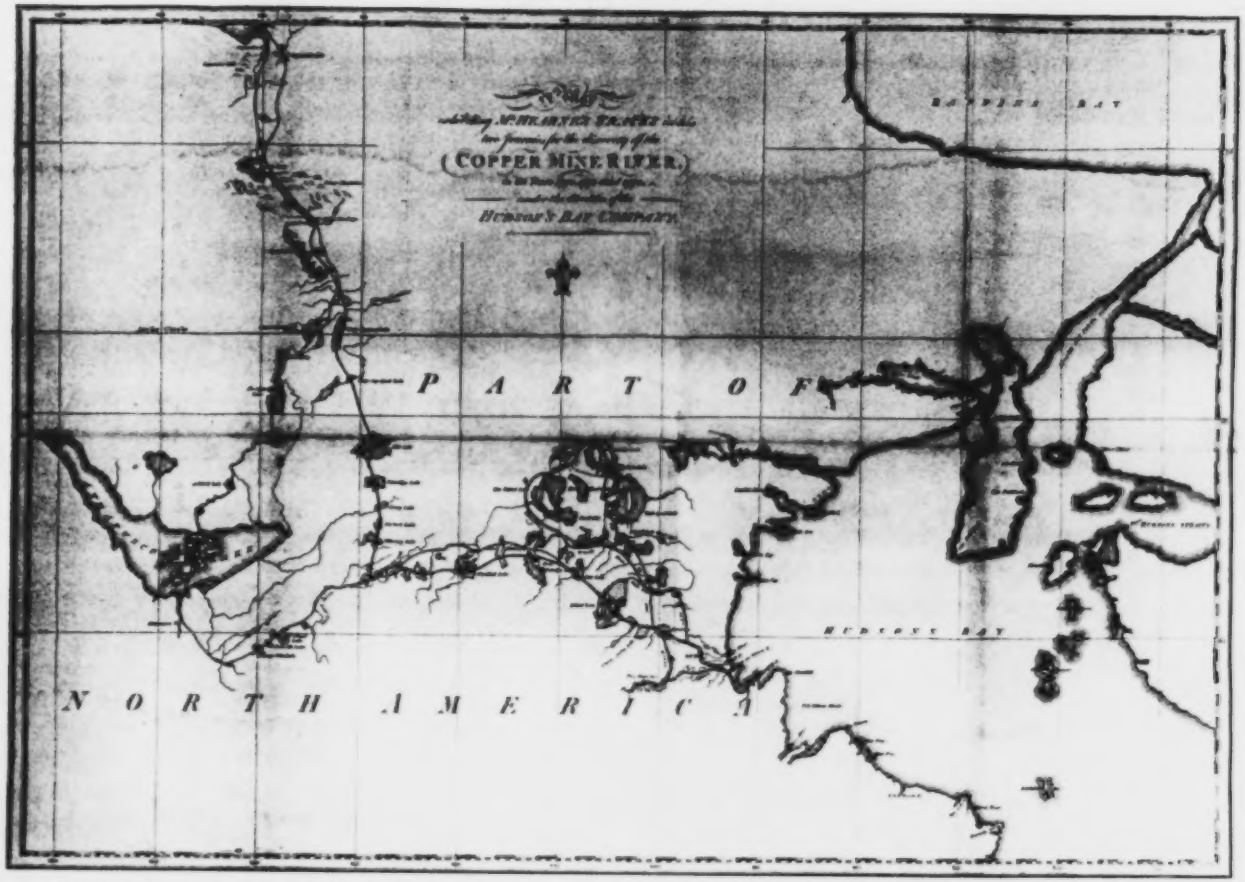

A Map / *exhibiting* M^r *HEARNE'S TRACKS in his / two Journies for the discovery of the /* COPPER MINE RIVER, / *in the Years 1770. 1771 and 1772.* / *under the direction of the /* HUDSONS BAY COMPANY. /

To face the Title Page. /

London Published Jan^y 1^st 1795. by Cadell & Davies Strand. /

Engraved by S. J. Neele 352, Strand. /

Mapmaker: Samuel Hearne (1740 - 1792)
Date: 1795
Size: 51 x 73 cm
Scale: RF [1:4,125,000]
From: Hearne, Samuel. *A Journey from Prince of Wale's Fort in Hudson's Bay, to the Northern Ocean.* London: Printed for A. Strahan and T. Cadell. And sold by T. Cadell Jun. and W. Davies, (Successors to Mr. Cadell,) in the Strand, 1795.

Map 33
Glenbow Library

Continual attacks by Arthur Dobbs against the Hudson's Bay Company finally resulted in a government inquiry. The Company's monopoly was ratified but her policy of non-exploration was criticized. This political intervention, together with decreasing fur supplies, led to a reversal in policy. In 1770 Samuel Hearne was sent to explore lands to the north of Hudson Bay. The journey to the mouth of the Coppermine River took two years and Hearne encountered many difficulties with his equipment. Measurements were unreliable, necessitating adjustment on later maps (Aspin, Map #11). Both map and journals were sent to London in 1772 but remained unpublished for fourteen years. Although forced into a policy of exploration, the Hudson's Bay Company refused to release information which it felt might benefit rivals. The material first appeared on Robert's 1784 map (Map #20) depicting the third voyage of Captain Cook. The journals and this finely engraved map were eventually published in 1795. Hearne's various tracks have been marked in colour.

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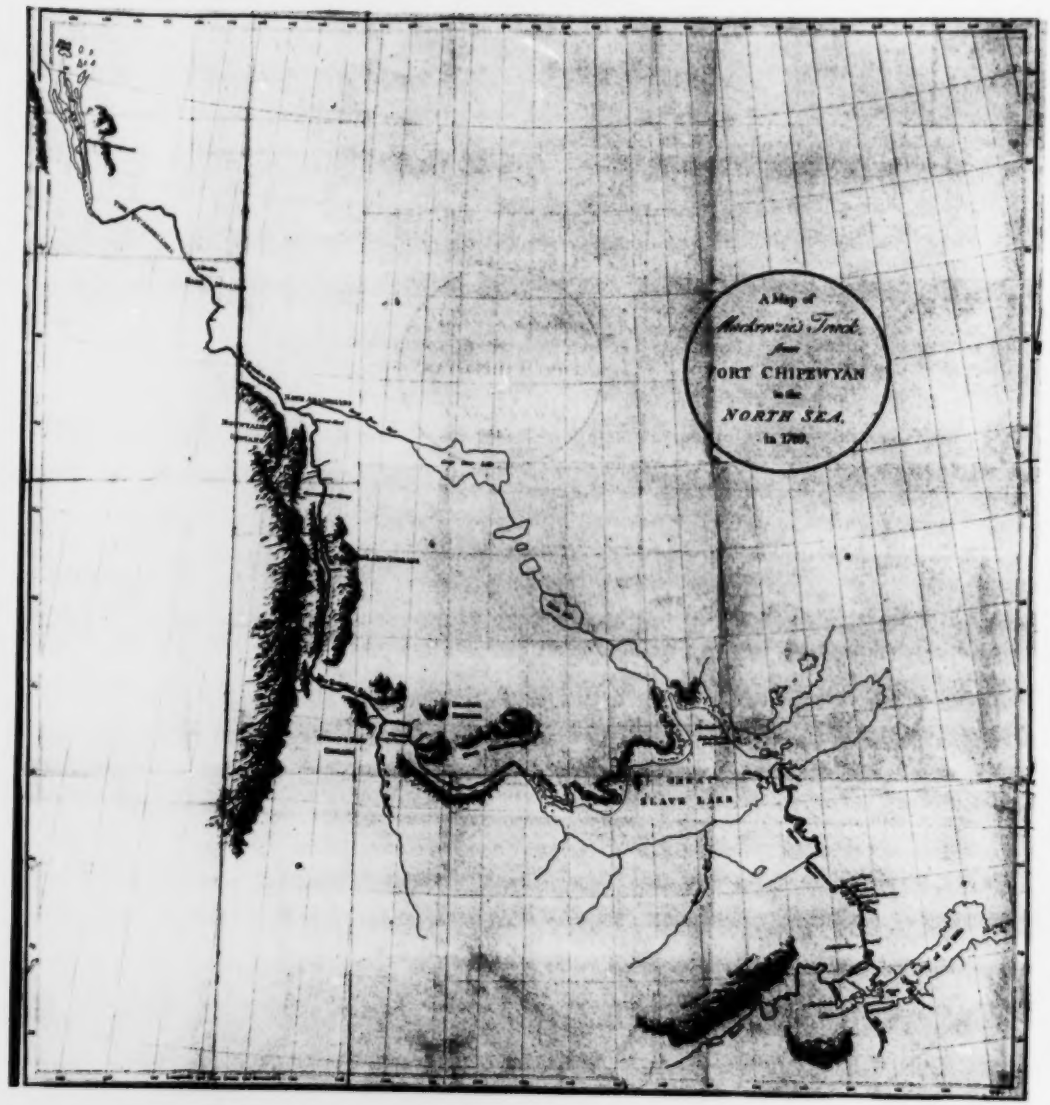
A Map of / *Mackenzie's Track,* / *from* / FORT CHIPEWYAN / to the / NORTH SEA, / in 1789. /

Mapmaker: Alexander Mackenzie (1763 - 1820)
Date: [1801]
Size: 59 x 56 cm
Scale: RF [1:2,300,000]
From: Mackenzie, Alexander. *Voyages from Montreal on the River St. Lawrence Through the Continent of North America to the Frozen and Pacific Oceans . . .* London: Printed for T. Cadell, Jun and W. Davies, Strand; and Morgan, Pall Mall and W. Creech, Edinburgh. By R. Noble, Old-Bailey, MDCCI.

If the Hudson's Bay Company reluctantly accepted exploration, other fur trading companies were more adventuresome. The XY Company, which employed Alexander Mackenzie, was formed when independent Montreal-based traders re-organized into larger companies. Trade routes through the interior were extensive and small companies could no longer afford to operate. Mackenzie was sent to establish new trading posts and to explore for new supplies. His journey north is given on this map which he published with his journals in 1801. Previous publication by Arrowsmith in 1795 had introduced his discoveries but details did not appear until 1801. Like Hearne, Mackenzie had trouble with his instruments. Although he took great care in his measurements, calculations were slightly out and his discoveries had to be altered on later maps (Arrowsmith, Map #9). Mountains are indicated by a lovely combination of profile and hachuring. The map contains no unnecessary detail and illustrates the ascendancy of functional cartography.



Map 34

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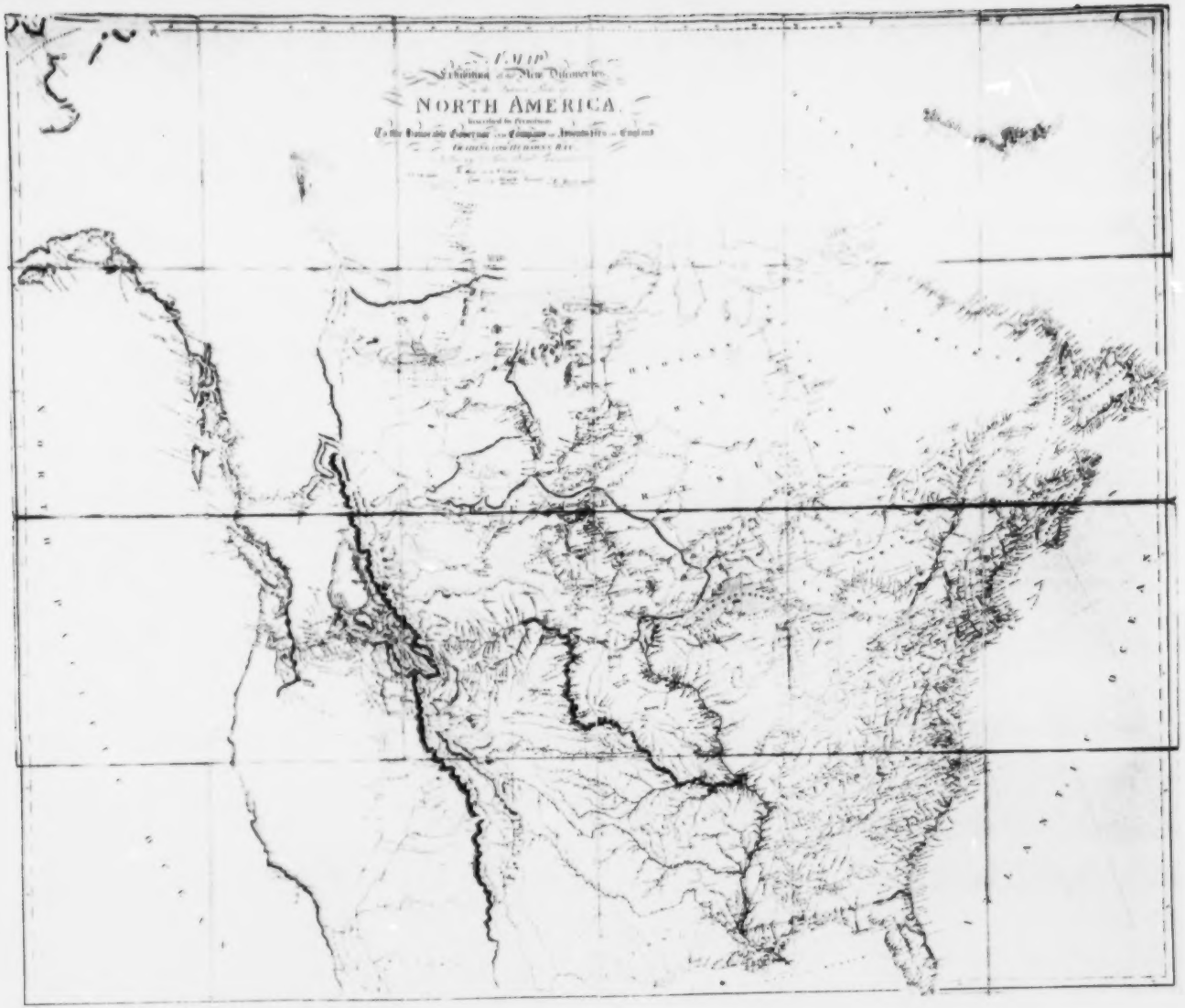

Map 35
UBC Library

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107

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Detail of Map 33

A MAP / Exhibiting all the New Discoveries, / in the Interior Parts of / NORTH AMERICA / Inscribed by Permission / To the Honorable Governor AND Company OF Adventurers OF England / *TRADING INTO HUDSONS BAY* / *In Testimony of their liberal Communications* / *To their most Obedient* / *and very Humble Servant.* / A. *Arrowsmith* / Pulte st. / N° *10 Soho Square.* / January 1st 1795 / Additions to 1811 / Additions to June 1814. /

London: *Published Jan 1795 by A. Arrowsmith N° 10 Soho Square.—— Additions to 1802.* /

Mapmaker:	Aaron Arrowsmith (1750 – 1823)
Date:	1814
Size:	125 x 146 cm
Scale:	RF [1:4,450,000]

Aaron Arrowsmith's great map of North America, published in 1795, attempted to include everything then known about the continent. The plates were conscientiously revised and by 1814, much had been added. Mackenzie's discoveries to the north and across to the Pacific appear. The complete Pacific coast is given and the interior has taken shape. The accurate delineation of interior features was done by David Thompson during 1793 - 1801. Thompson worked for both the Hudson's Bay Company and the North West Company and his skill as a surveyor was exceptional. He had trouble, however, finding a publisher for his work. Even Arrowsmith, who usually credits his sources does not mention Thompson, although Thompson's work is the basis of this representation. The Columbia River system is shown but Fraser's voyage to the Pacific (1808) does not appear. This map, like the map of the Pacific Ocean (Arrowsmith, Map #27), was produced in multiple sheets. It has been cut and mounted on linen for durability but some of the joins are not tight and distoration of information occurs.

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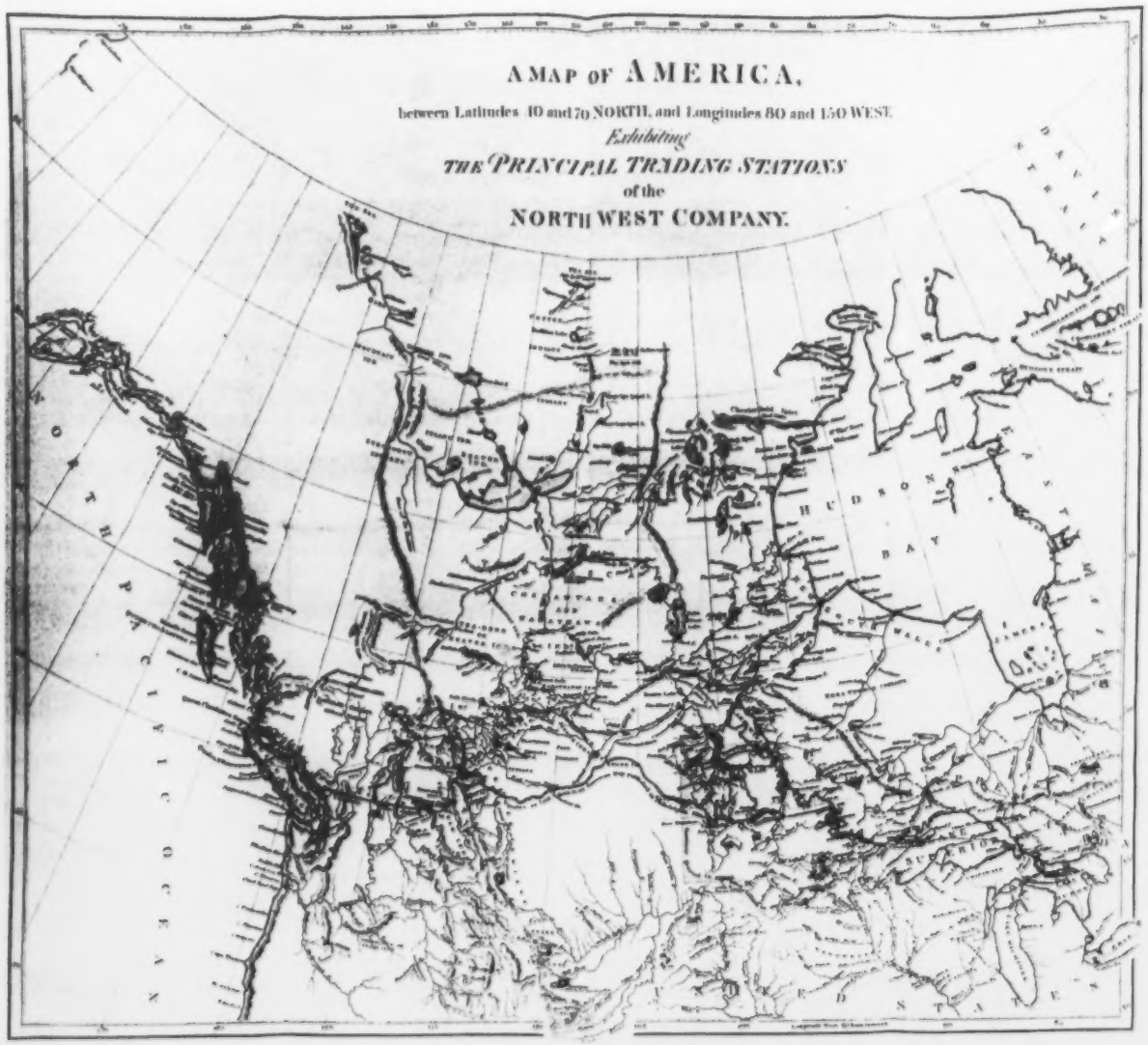

A MAP OF AMERICA, / between Latitude 40 and 70 NORTH, and Longitudes 80 and 150 WEST, / *Exhibiting* / *THE PRINCIPAL TRADING STATIONS* / of the / NORTH WEST COMPANY. /

MacKenzie N° 38 Norfolk Street Strand /

Mapmaker:	Alexander Mackenzie (1763 - 1820)
Date:	[1817]
Size:	45 x 50 cm
Scale:	RF [1:9,000,000]
From:	*Notice Respecting the Boundary Between His Majesty's Possessions in North America and the United States*. London: Printed by McMillan, Bow-Street, Covent-Garden, 1817.

This map, printed in 1817 to accompany a pamphlet on the Canada/United States border disputes, is based on an earlier map published by Alexander Mackenzie in 1801. An attempt has been made to remove the Mackenzie imprint but a faint shadow remains bottom centre. The map shows the land granted to Lord Selkirk for settlement by the Hudson's Bay Company in 1813. The grant covered land worked by the North West Company and was given in an attempt to block the rival company's trade. Conflict with the Indians and international boundary agreements finally eroded the settlement. The border claimed by the Unites States in 1816 appears. Imprecise wording of previous treaties led to different interpretations of the border's position which was finally settled in 1846 (see also Burr, Map #26).

Map 36
UBC Library

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ABORIGINAL MAP /OF / NORTH AMERICA, / *denoting the Boundaries* / and the Locations of various / INDIAN TRIBES. / SELECT COMMITTEE – ON THE HUDSON'S BAY COMPANY. /

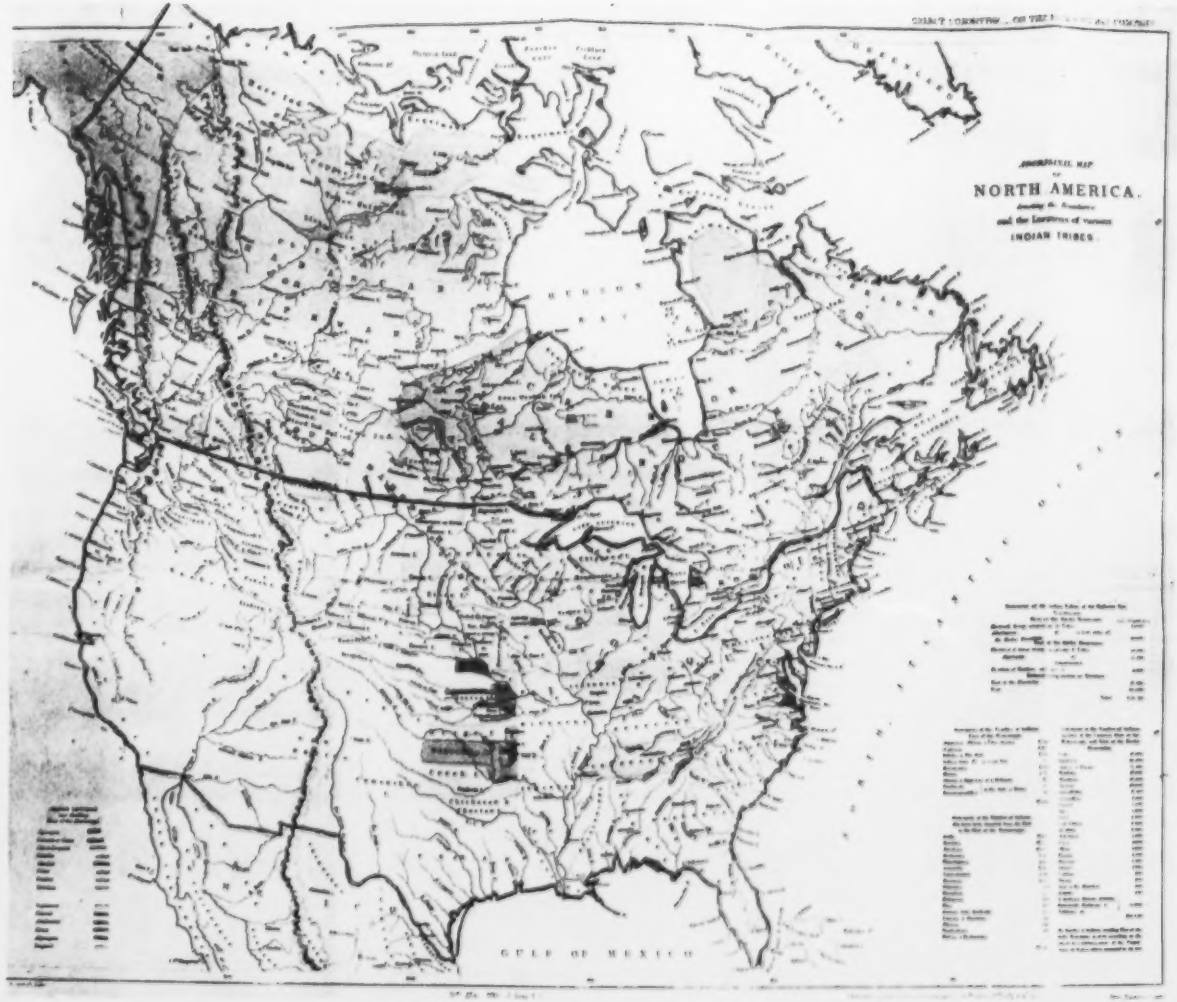
John Arrowsmith, Litho: /

N.os 224. 260 (Sess. 2) /

Ordered, by The House of Commons, to be Printed, 31st July & 11th August, 1857. *Henry Hansard, Printer.* /

Mapmaker: John Arrowsmith (1790 - 1873)
Date: 1857
Size: 47 x 55 cm
Scale: RF [1:10,000,000]
From: Great Britain. *House of Commons, Report from the Select Committee of the Hudson's Bay Co.*, Hansard, 1857.

To efficiently administer an expanding empire, the British Parliament required information on a variety of subjects. Parliamentary Papers often included maps as they succinctly condensed a large amount of material. This map by John Arrowsmith accompanied a report before the House of Commons in 1857. The map was lithographed as the material was needed quickly. Although political boundaries and physical features are given, the specialized information, in this case the distribution of Indian tribes, is more important. Tribal extents are indicated by solid colour and size is given statistically in accompanying textual material. The colour is applied in a pale wash, carefully chosen to harmonize without blending. The Great Lakes have been shaded to show up after colour was applied to the rest of the map.



Map 37

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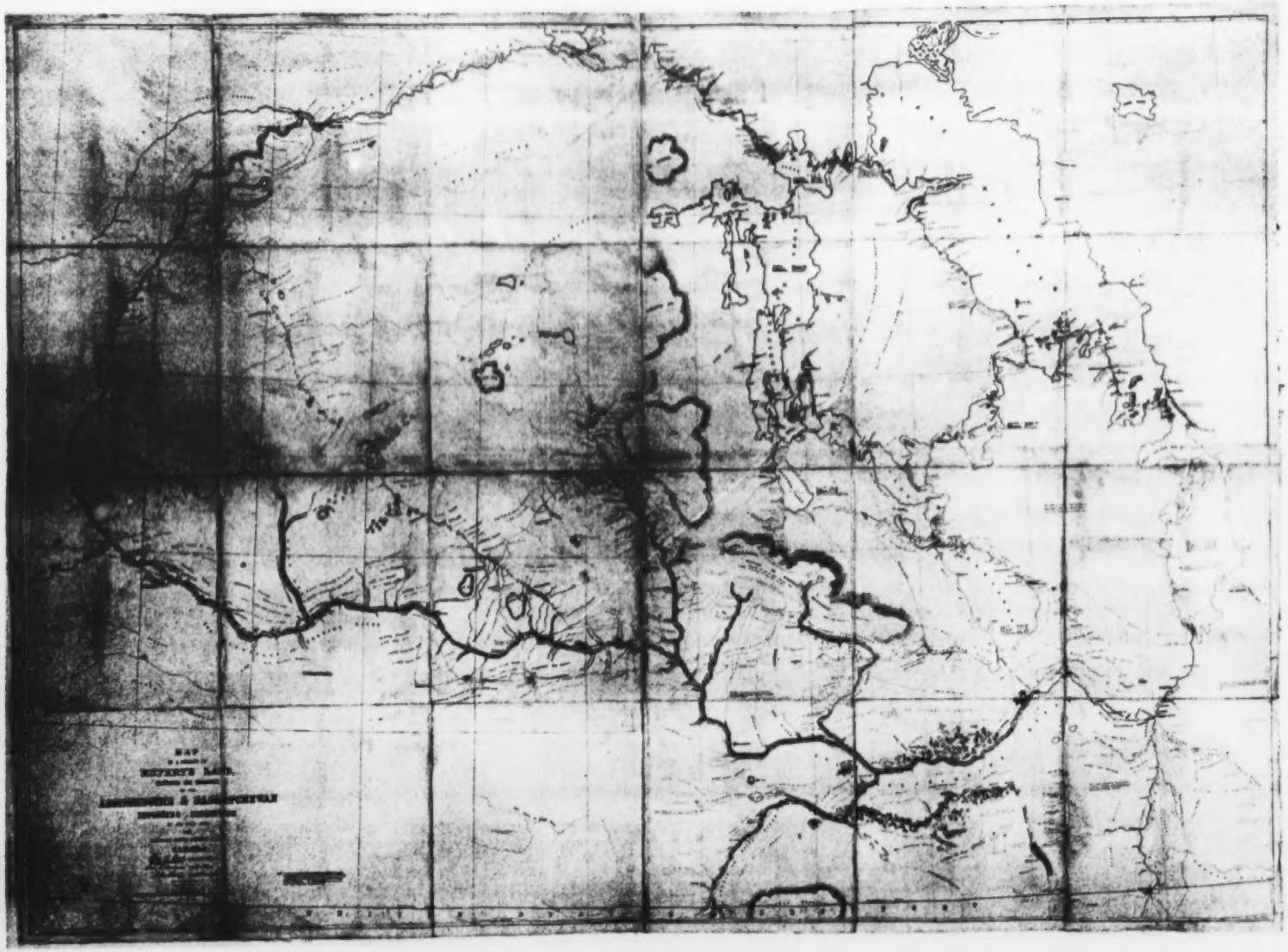

Map 38
Glenbow Lib

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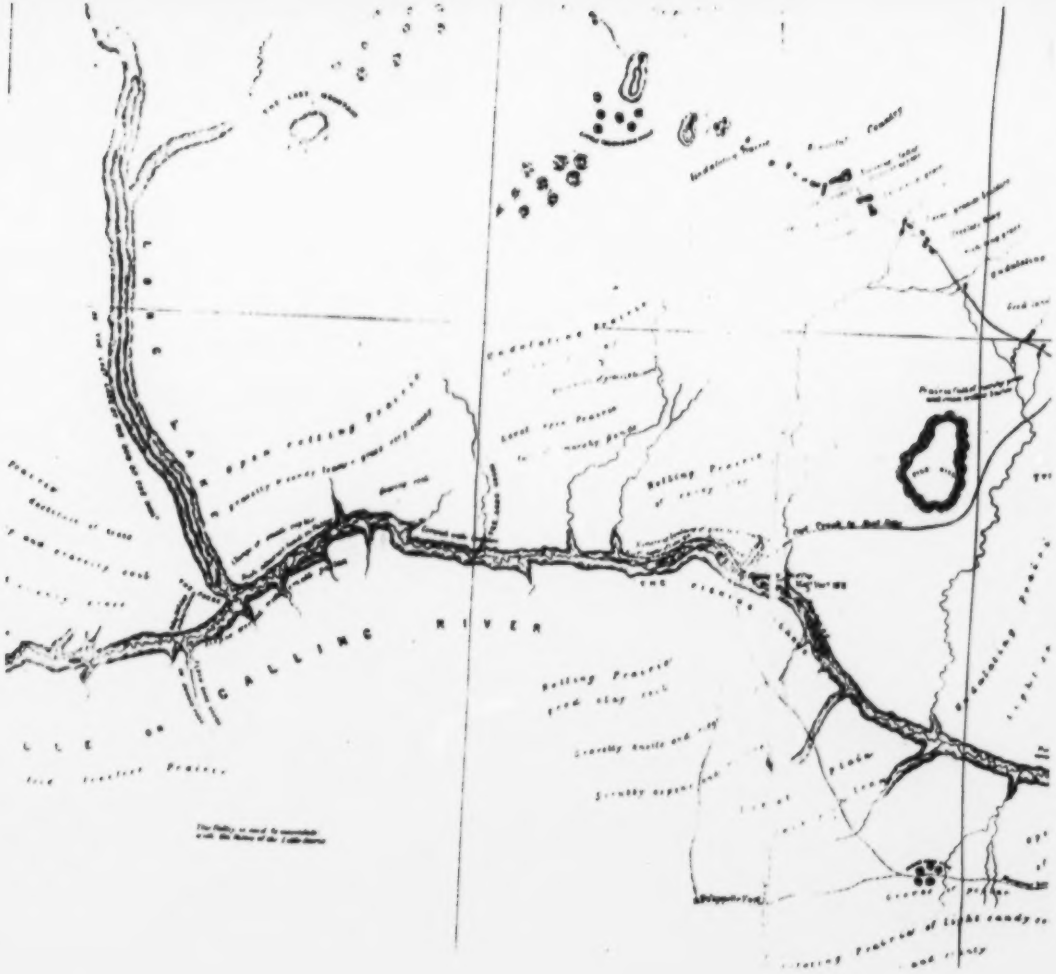

MAP / OF A PORTION OF / RUPERT'S LAND, / SURVEYED AND EXAMINED / BY THE / ASSINNIBOINE & SASKATCHEWAN / EXPLORING EXPEDITION / IN THE YEAR 1858; / UNDER / INSTRUCTIONS FROM THE PROVINCIAL SECRETARY, / CANADA. Henry Y. Hind In Charge of the Expedition. / James A. Dickinson Surveyor & Engineer. / John Fleming Assis't. Surveyor & Draughtsman. / Engraved by Maclean & Co. Toronto. /

Date: [1859]
Size: 147 x 206 cm
Scale: RF [1:400,000]
From: Hind, H. Y. *North West Territory. Reports of Progress, together With a Preliminary and General Report on the Assiniboine and Saskatchewan Exploring Expedition* Toronto: Printed by John Lovell, 1859.

Increased population in the eastern part of Canada put pressure on both the Colonial and British Governments to develop alternate areas of settlement. The western interior was a likely area in which to expand but little was known about its potential. Both governments funded exploratory surveys; Captain Palliser led the British party, Hind and Dawson the Canadian. The Canadian expedition was divided in two. A surveying party was led by Simon Dawson and Henry Hind took charge of the scientific section. Hind was a professor of chemistry and geology at Trinity College, Toronto and his surveys were among the first geological studies done in western Canada. Notes on vegetation, soil, rock formation and cultivation appear on this large-scale map issued in 1859. Although notations had previously appeared on maps (Arrowsmith, Map #35), their use was not extensive. Engraving comments was time consuming but with the introduction of lithography, annotations proliferated. Remarks were traced rather than engraved, and could be reproduced with relative ease during the printing process.

Detail of Map 38

ROUTE
BY ROAD &
NAVIGATION
HUDSON'S BAY
LAKE WINNIPEG
CALIFORNIA
STATEMENT OF DISTANCES BY LAND AND WATER, RESPECTIVELY, BETWEEN HUDSON BAY, LAKE SUPERIOR, AND FORT LANGLEY, ON FRASER'S RIVER.

Map 39
Glenbow Library

Map / Showing the /ROUTE / BY ROAD & / NAVIGATION / for / CONNECTING THE ATLANTIC & / PACIFIC OCEANS. / To Accompany S.J. Dawson's / REPORT ON THE / Red River Expedition /

LITHOGRAPHED BY J. ELLIS, TORONTO /

Compiled by Mess^rs. Bruce & Brunless. /

Date: [1859]
Size: 25 x 62 cm
Scale: RF [1:10,250,000]
From: Dawson, S.J. *Report of the Exploration of the Country Between Lake Superior and the Red River Settlement* . . . Toronto: John Lovell, 1859.

The primary purpose of the Red River Expedition was to map and describe the area between Lake Superior and the Saskatchewan River. Of secondary interest were feasible transportation routes, as such systems were essential to new settlement. The scientific information was gathered by Professor Hind while Simon Dawson led the surveying division. Dawson collected information about topography and surveyed likely transportation routes. He also examined possible ways of extending these routes to the Pacific. The map accompanied Dawson's final report published in 1859 and outlined what was then believed to be the most accessible route to the west. Textual information is printed with the map on a single sheet of paper. Both map and report were published in Canada, products of a new Canadian printing industry.

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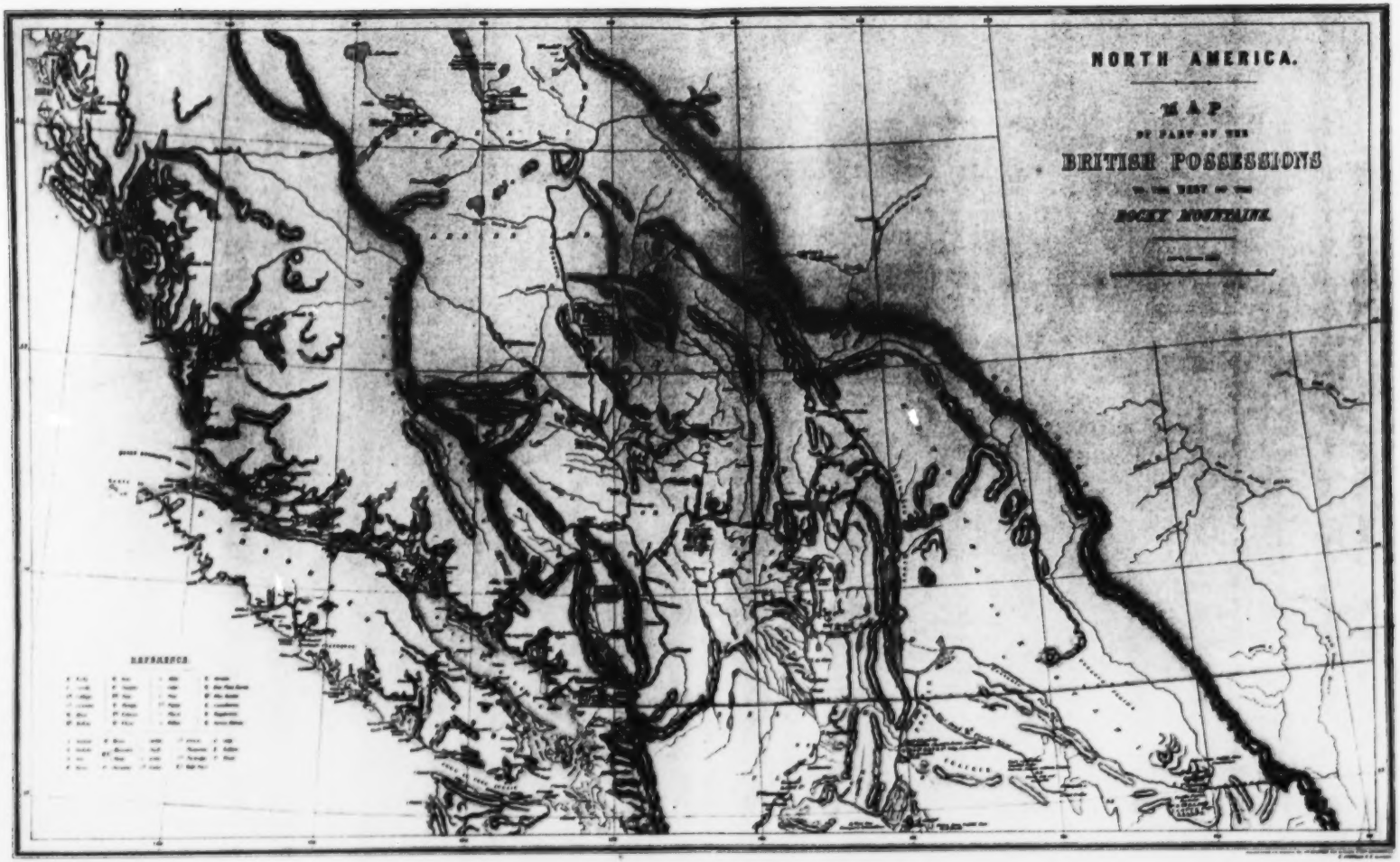

Map 40

UBC Library

NORTH AMERICA. / MAP / OF PART OF THE / BRITISH POSSESSIONS / TO THE WEST OF THE / *ROCKY MOUNTAINS.* /

Lithographed & Printed at the Topographical Depôt, WAR DEPARTMENT, Under the Direction of CAPT^N ELPHINSTONE R E / H JAMES COL^L R E. Superintendent. /

Date: [1858?]
Size: 54 x 90 cm
Scale: RF [1:1,500,000]

While expeditions by Hind, Dawson and Palliser increased knowledge of the interior plains, simultaneous exploration continued in British Columbia. The Hudson's Bay Company maintained control of the area and this map was probably compiled from Company records. No publication date is given but internal evidence suggests that it was drawn between 1849 and 1858. Fort Hope (established 1849) is named but New Westminster (incorporated 1859) is not. Water bodies and major river systems are delineated and information about climate, topography and terrain is given. The map includes suggestions for cultivation, comments about the natives and notes available food supplies. Vegetation and wildlife are indicated by symbols and are explained in a reference chart. Symbols were increasingly employed to represent generalized information since they were quicker to use when information was repetitive. They also occupied less space in areas where information was concentrated, leading to a more legible map.

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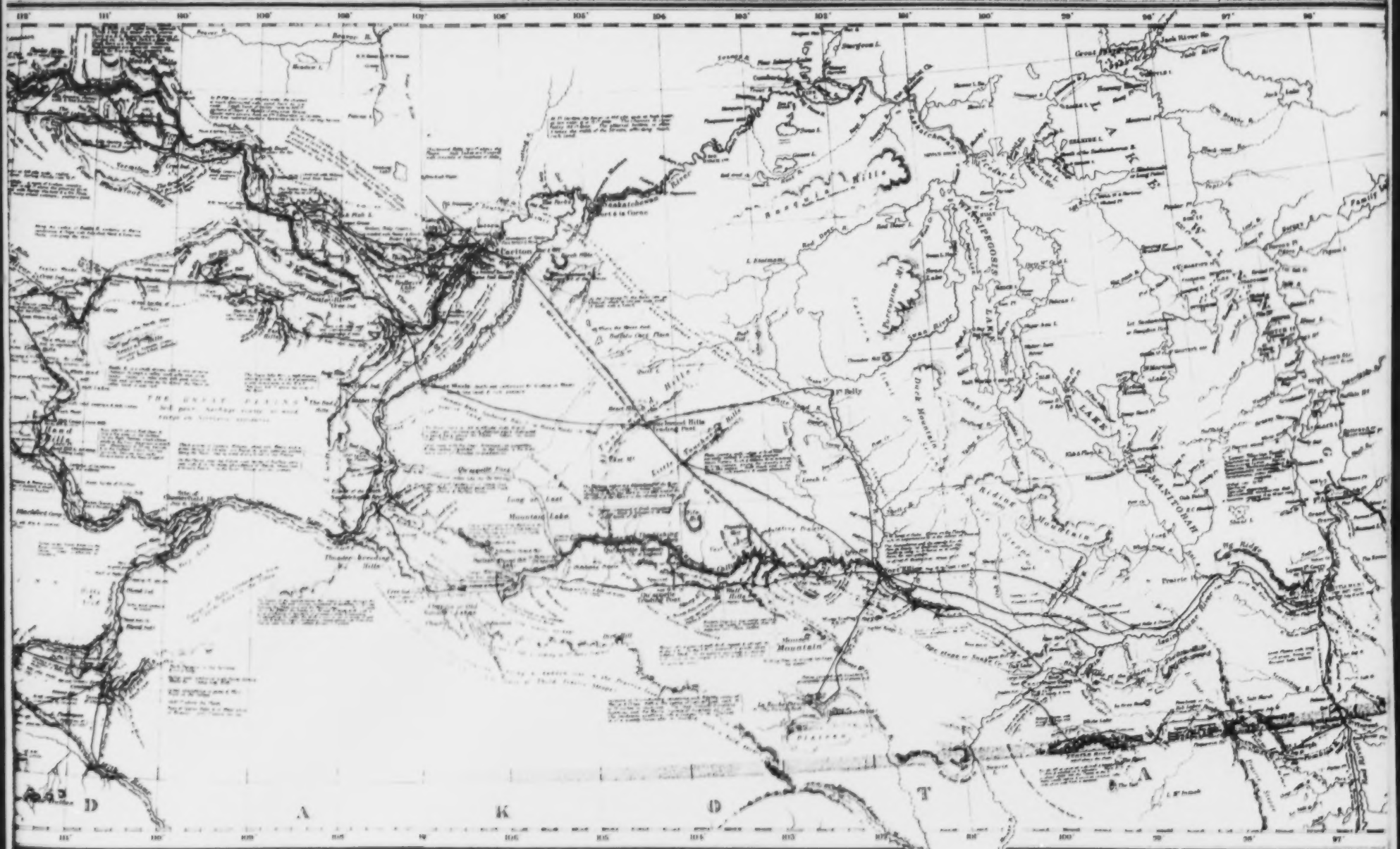

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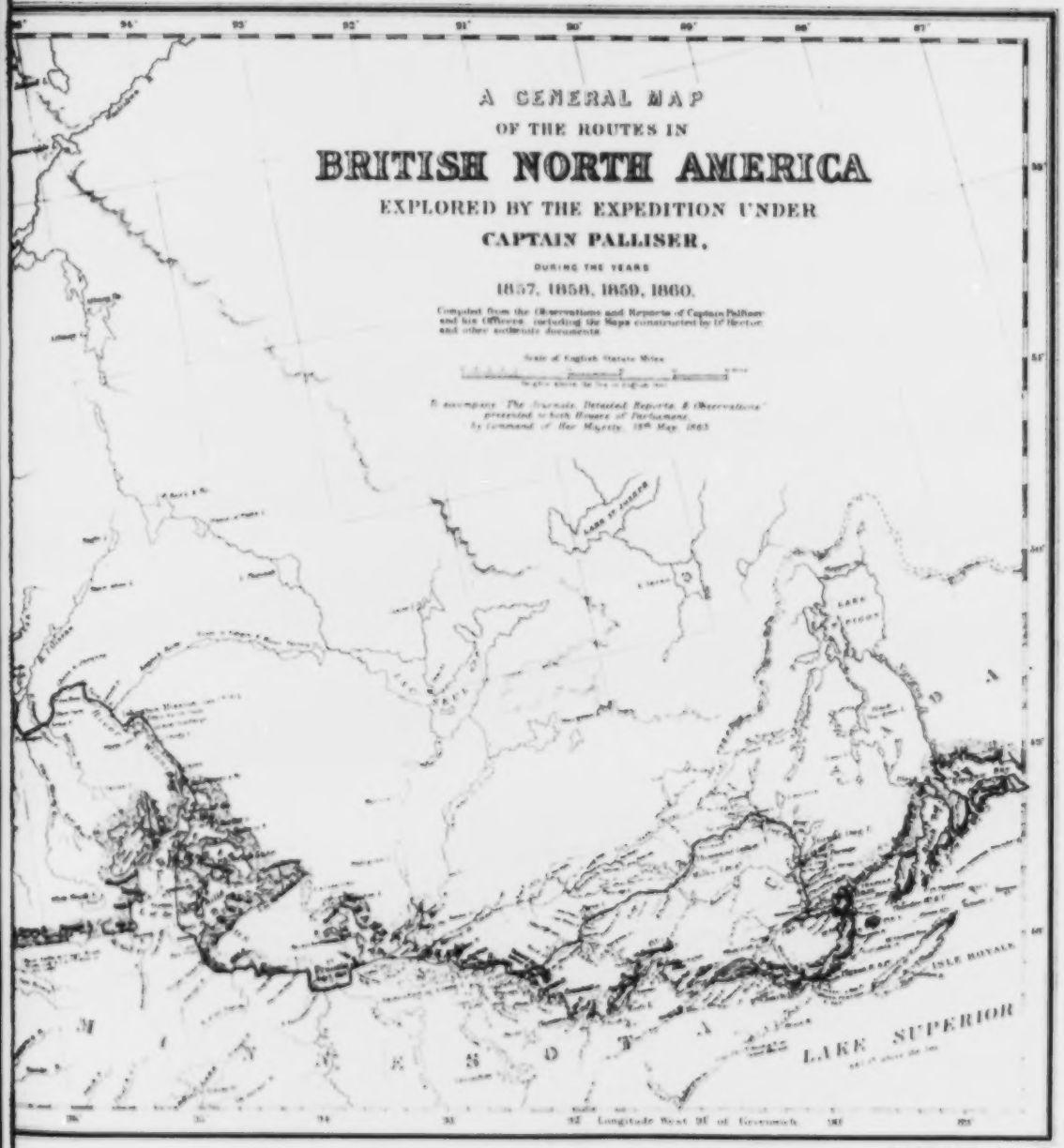

A GENERAL MAP / OF THE ROUTES IN / BRITISH NORTH AMERICA / EXPLORED BY THE EXPEDITION UNDER / CAPTAIN PALLISER, / DURING THE YEARS / 1857, 1858, 1859, 1860. / Compiled from the Observations and Reports of Captain Palliser / and his Officers, including the Maps constructed by Dr. Hector, / and other authentic documents. / . . . / *To accompany "The Journals, Detailed Reports, & Observations" / presented to both Houses of Parliament, / by Command of Her Majesty, 19th May, 1863.* /

Stanford's Geographical Estab' London, 1865. /

Mapmaker: Edward Stanford (1827 - 1904)
Date: 1865
Size: 32 x 126 cm
Scale: RF [1:2,200,000]
From: Palliser, John. *The Journal, Detailed Reports and Observations Relative to the Exploration* . . . London: HMSO, 1863.
Index & Maps to Captain Palliser's Report London: HMSO, 1865.

Captain John Palliser was an Irish gentleman who enjoyed travel. A North American hunting trip had convinced him that the prairies should be examined, and in 1857, he persuaded the Royal Geographical Society to sponsor an exploratory survey. The expedition, financed by the British government, included scientists, engineers, surveyors, even an official photographer. For three years Palliser's party took observations and measurements, exploring the area between the fifty-fourth and forty-nineth parallels from Lake Superior to the Pacific. Notes were made on landforms, vegetation, rock formations, soil, inhabitants and climate. The expedition had a long-lasting influence on the settlement of the prairies for it declared "Palliser's Triangle" arid and unsuitable for cultivation. The map is crowded with incident. The annotations are almost a daily journal and give a vivid impression of the country explored. These remarks, for all their scientific detachment, are full of personal opinions, making them both entertaining and educational.

Map 41

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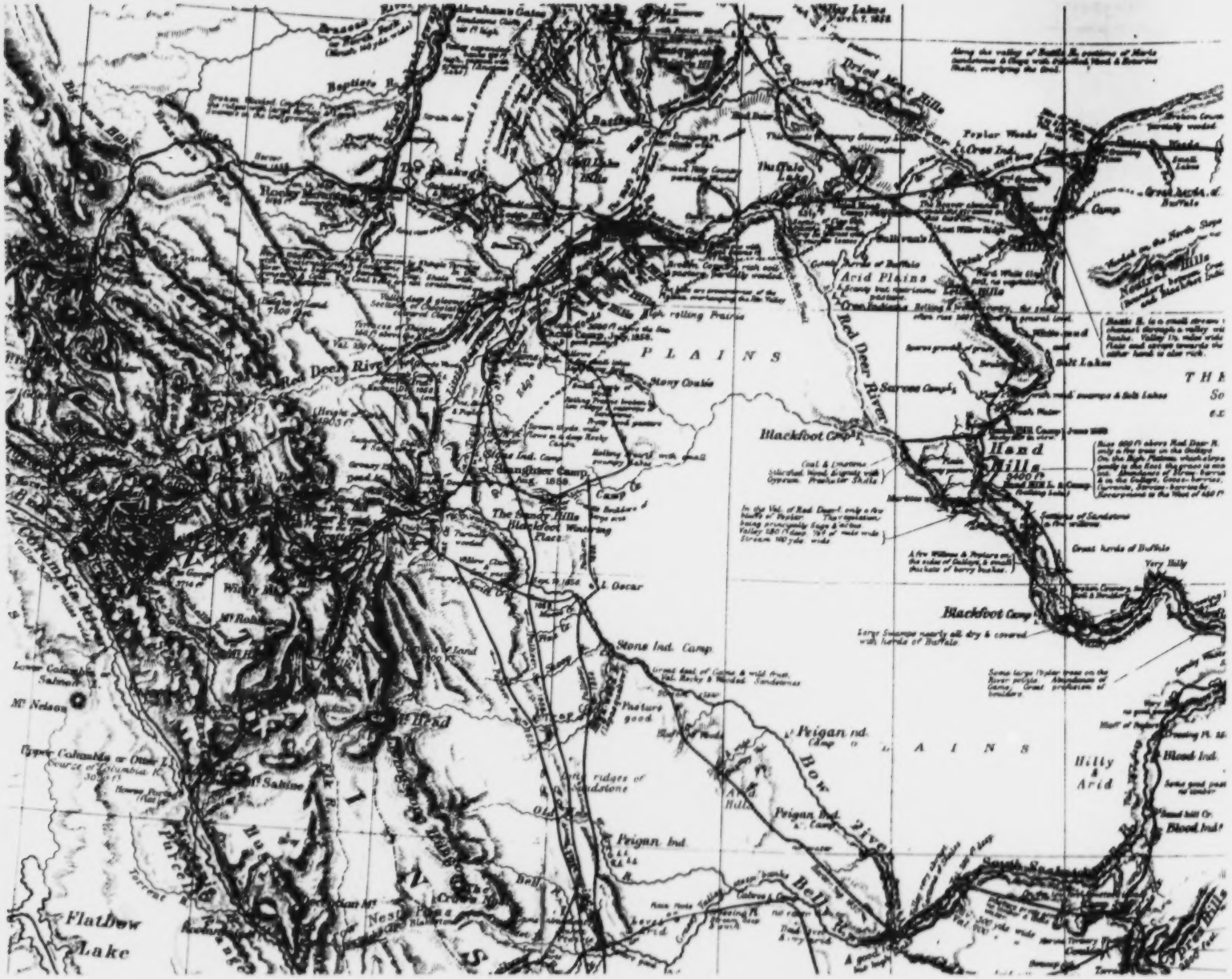
Glenbow Library



Detail of Map 41

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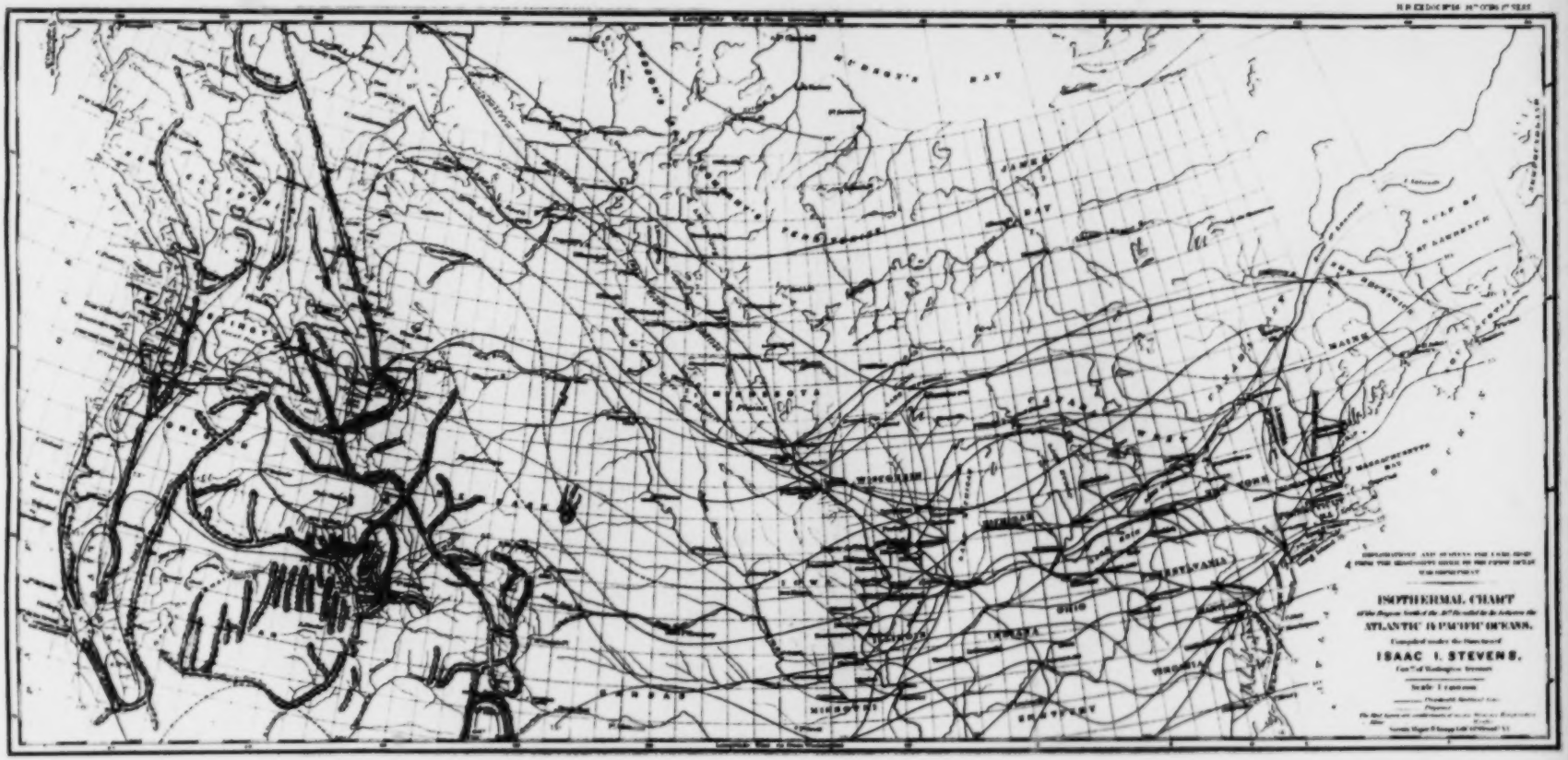

Map 42

UBC Library

EXPLORATIONS AND SURVEYS FOR / A RAIL ROAD / FROM THE MISSISSIPPI RIVER TO THE PACIFIC OCEAN / WAR DEPARTMENT / ISOTHERMAL CHART / *Of the Region North of the 36th Parallel &c &c between the* / ATLANTIC & PACIFIC OCEANS, / Compiled under the Direction of /ISAAC I. STEVENS, / Gov.r of Washington Territory / Sarony, Major & Knapp, Lith: 449 Broad: N.Y. / H. R. EX. DOC. N.o 56 - 36th CONG. 1st SESS. /

Date: [1860]
Size: 33 x 69 cm
Scale: RF [1:7,450,000]

Canadian expansion in the west was largely stimulated by American developments. The American movement west began early in the nineteenth century and consequently surveys for adequate rail facilities started earlier than Canadian efforts. This map is part of a series done for the United States government during the mid 1850s. A general outline of North America is used as a base map and information is overprinted in colour. Lines of equal temperature appear; blue for winter and red for summer. Further information is given in the symbols used. A solid black line is used for existing railways and a broken line for suggested routes. The map also includes a statement of scale in the form of a representative fraction. Such statements are rare on maps before the twentieth century as scale, when given, was generally in verbal or bar form. Although prepared as a basis for choosing an American line, the map covers all of North America between the thirty-sixth and sixty-fifth parallels. Its comprehensive coverage probably made it useful to Canadian engineers when studies for the Canadian Pacific Railway were undertaken.

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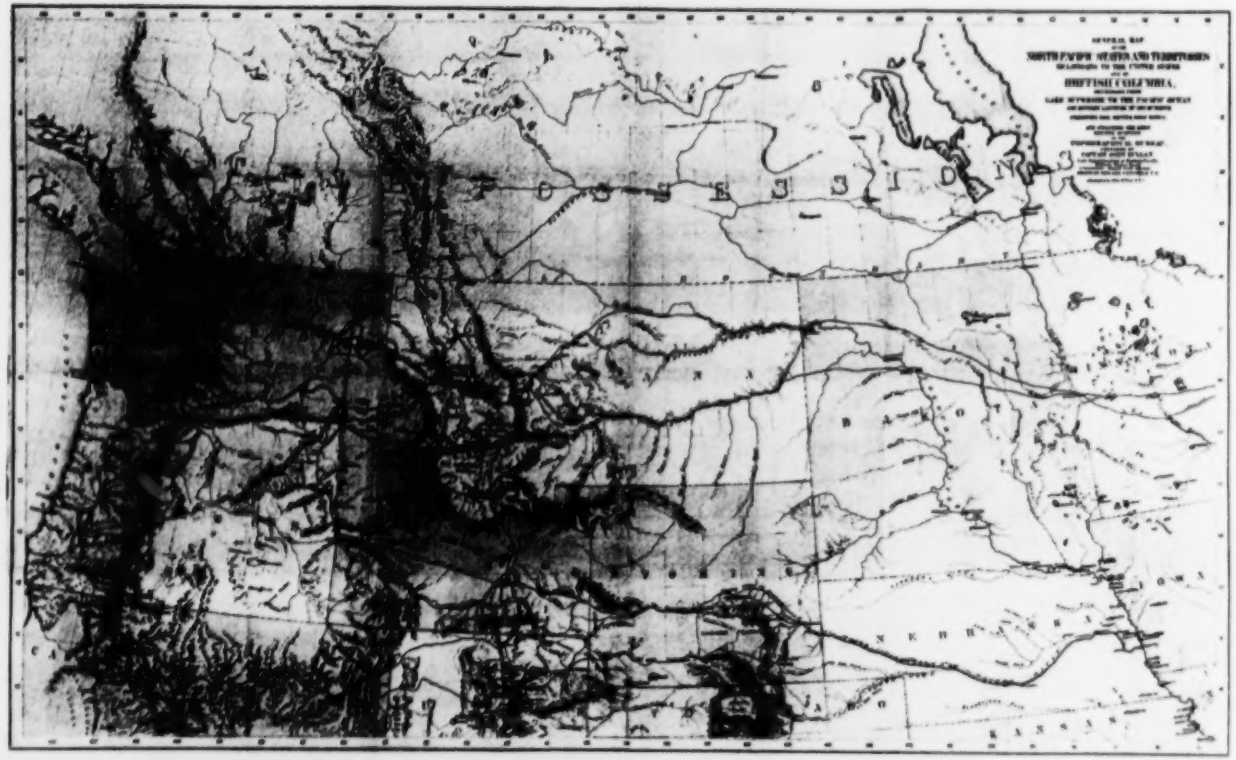
GENERAL MAP / OF THE / NORTHPACIFIC STATES AND TERRITORIES / BELONGING TO THE UNITED STATES / AND OF / BRITISH COLUMBIA. / EXTENDING FROM / LAKE SUPERIOR TO THE PACIFIC OCEAN / AND BETWEEN LATITUDE 39° AND 53° NORTH. / EXHIBITING MAIL ROUTES, GOLD MINES. / AND INCLUDING THE MOST / RECENT SURVEYS / OF THE / TOPOGRAPHICAL BUREAU. / PREPARED BY / CAPTAIN JOHN MULLAN / Late Superintendent of Northern Pacific / Military Wagon Road. / & Commissioner Northern Pacific Rail Road. / DRAWN BY EDWARD FREYHOLD T.E. / Lithographed by J. Bien, 24 Vessey St. N.Y. /

Mapmaker: John Mullan (1830 - 1909)
Edward Freyhold
Date: [1867]
Size: 52 x 96 cm
Scale: RF [1:2,750,000]
From: Mullan, John. *Miners and Travellers Guide to Oregon, Washington, Idaho, Montana, Wyoming & Colorado.* New York, 1867.



Map 43
UBC Library

Published during the California gold rush, this map is an American counterpart to the British Columbia and Yukon gold maps seen earlier (Patterson, Map #29; Millroy, Map #30). The map was drafted by Edward Freyhold to accompany Captain John Mullan's guide to various western states. In addition to gold fields, Freyhold's map includes information on state boundaries, drainage systems and transportation routes. The advanced development of the American west in relation to Canada is quite noticeable. Road systems cross America's interior but western Canada is still serviced by river systems. Numerous settlements exist in the States in contrast to Canada's few fur trading posts. Like its predecessors, this map makes no attempt to represent topography. Mountains are indicated by hachures but exact height and change of land forms are not given. Measuring height gradation was a lengthy and expensive procedure which had to await further technological developments before it became feasible for small-scale maps.

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Part Five

The Settlement Period

By the last quarter of the nineteenth century, most of North America had been explored. Major configurations had been mapped, first by individual explorers and later by government surveys. By 1870 the shape of the land and something of its nature was known, but vast areas were still only lightly populated (Arrowsmith, Map #44). The period of initial exploration was over; consolidation and settlement began (CPR, Map #47).

Re-organization of the mapping trade also changed towards the end of the century. Increased emphasis on scientific representation changed methods of mapping information as well as gathering it. Just as one man could no longer collect all the material needed for a single map, so too, individual firms could not keep pace with increased technology. Map production became predominantly the domain of large government agencies and of commercial firms who could afford the expensive machinery necessary (CPR, Map #47; Imperial Oil, Map #49).

The exploration and settlement of the Canadian west spans five centuries of geographical and technical history. At first, mapping focussed upon geographical relationships; later, secondary characteristics were emphasized. Successive exploration, moreover, changed both the face of the land and the factors which motivated further activity. Perhaps such modification is most clearly seen in the changing emphasis on transportation routes.

Early approaches to the continent were by ship. As the only means of crossing intervening oceans, these ships were vital to early European exploration. Ferdinand Magellan first discovered the water route to the Pacific and his ship, the Victoria, rides proudly in the western ocean on Ortelius' map (Map #15). Sail rigged ships appear on many early maps and later, steam-driven ships make their appearance (Gastaldi, Map #1; Blaeu, Map #7; Millroy, Map #30).

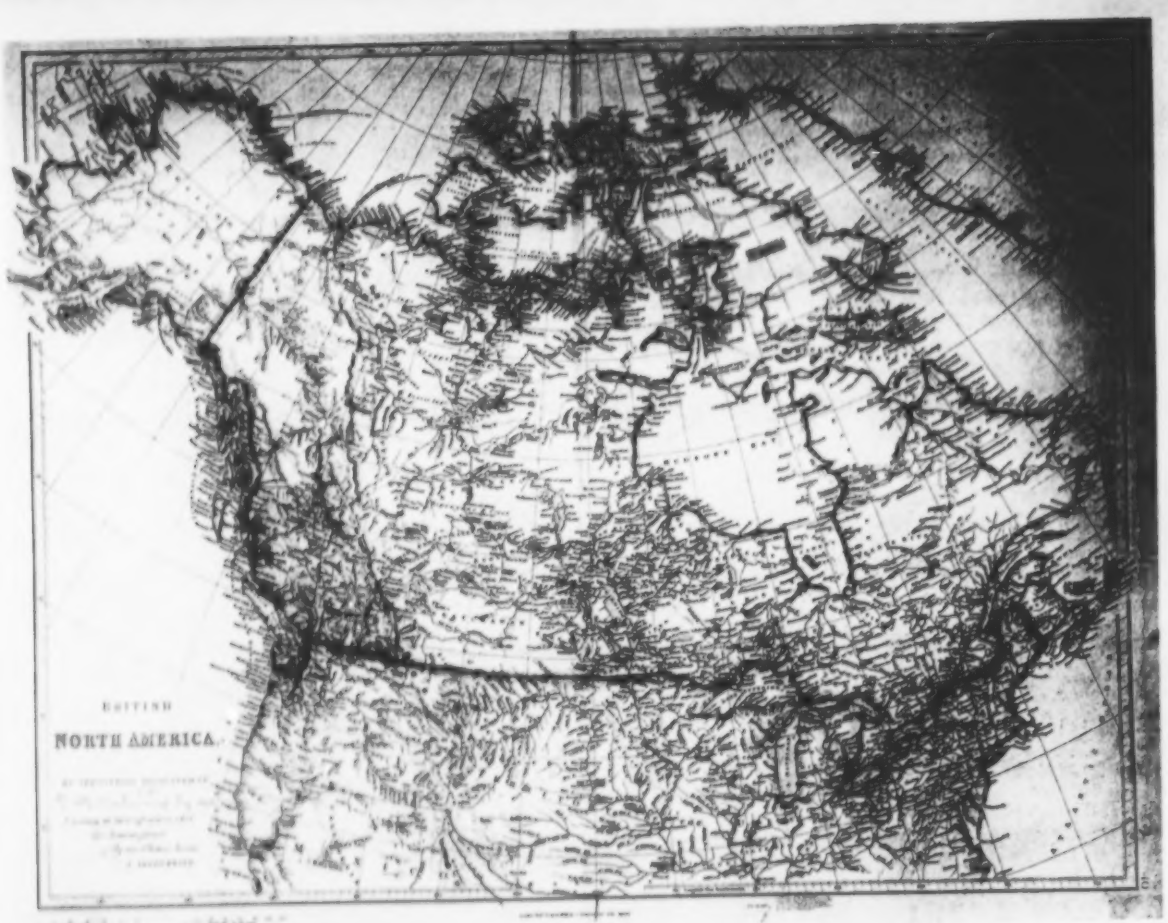
Penetration of the interior followed. The most natural routes into the continent were by river systems. Since these streams could not be navigated by large ocean-going vessels, Indian canoes were adopted. These highly mobile craft opened up vast stretches of new territory and formed the basis of the fur trade network. The extent and concern with these water routes are emphasized on maps of the period (Mackenzie, Map #36). Although major drainage systems are carefully mapped, little additional information is given.

Agricultural expansion necessitated more efficient methods of communication, and developments in the west accelerated with the advent of the Industrial Revolution. The railway unified the country and made large sections of previously unknown territory accessible (CPR, Map #47). Trails and roads were used to link new settlements, as these were cheaper to construct than railways (North West Mounted Police, Map #46). The expanding network of roads made up-to-date maps essential and the modern automobile map evolved (Imperial Oil, Map #49). Air travel followed, facilitating communication between widely separated communities (Air Mail Routes, Map #50). These transportation routes opened, developed and finally completed exploration of the west.

BRITISH / NORTH AMERICA. / BY PERMISSION DEDICATED TO / *The Hon^ble Hudsons Bay Company.* / *Containing the latest information which / their documents furnish.* / *By their Obedient Servant* / J. ARROWSMITH. /

London, Publ^d 25 April 1859, by J. Arrowsmith, 10. Soho Square. /

Mapmaker: John Arrowsmith (1790 – 1873)
Date: 1859
Size: 28 x 48 cm.
Scale: RF [1:2,100,000]



Map 44

The Arrowsmith firm had mapped information about the Canadian west since concentrated exploration began. The firm's final maps of 1858 and 1859 culminate a fine mapping career as well as all known knowledge of the north western part of Canada. Exploration in the Arctic produced information for a continuous shoreline with only the area towards the pole still undiscovered. Hydrographic charting outlined a detailed western coast and surveys in the interior gave shape to the central regions. Extensive drainage systems appear and mountainous areas are suggested by hachures. Settlements are marked and different geographical areas indicated in block script. Locations of major Indian tribes are also noted. Borders settled by treaty with Russia in 1825 and the United States in 1846 appear and areas of political jurisdiction are given with contrasting colours. The outline of North America had emerged although development had yet to begin.

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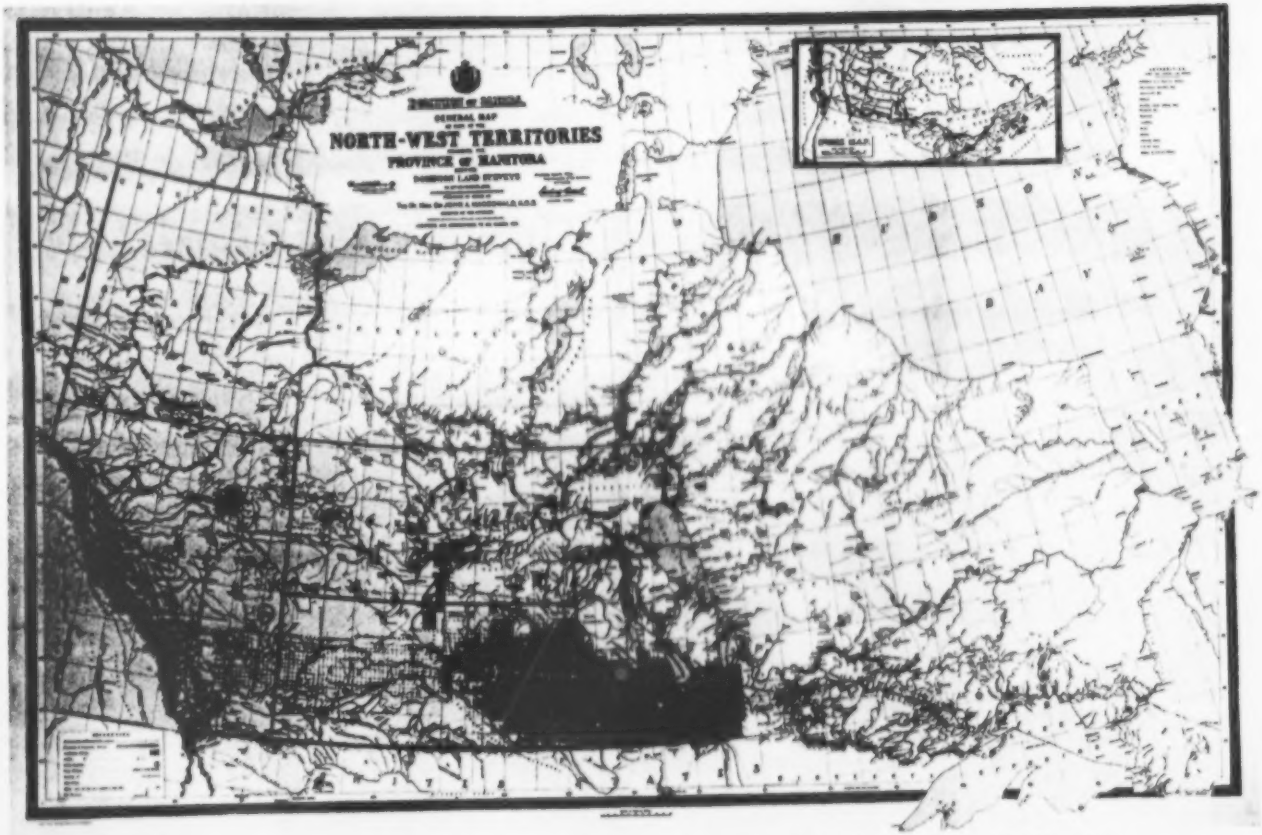

DOMINION OF CANADA / GENERAL MAP / OF PART OF THE / NORTH-WEST TERRITORIES / INCLUDING THE / PROVINCE OF MANITOBA / SHEWING / DOMINION LAND SURVEYS / TO 31st DECEMBER, 1882 / PUBLISHED BY ORDER OF / THE RT. HON. SIR JOHN A. MACDONALD, K.C.B. / MINISTER OF THE INTERIOR / ADDITIONS AND CORRECTIONS TO 15th MARCH 1883.

COMPILED AND DRAWN BY J. JOHNSTON, CHIEF DRAFTSMAN

PHOTO. LITH. BY THE BURLAND LITH. CO., MONTREAL.

Date: 1883
Size: 69 x 109 cm
Scale: RF [1:2,534,400]

Map 45
Glenbow Library

Although the stories of the Mounted Police and the Canadian Pacific Railway have always captured public attention, the Dominion Land Survey played an equally important, if less romantic, role in the settlement of the Canadian west. In the space of little more than two decades, teams of hardy surveyors surveyed, mapped, and prepared for settlement most of the arable lands of the Canadian northwest. Their work, coupled with that of the Mounted Police, ensured that the settlement of the Canadian prairies took place with little of the disorder that had characterized much of the opening of the American west. This map, typical of many produced by the Department of the Interior in the 1880's and 1890's, depicts the progress of the Dominion Land Survey system to 1883.

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DOMINION OF CANADA. / MAP SHEWING / MOUNTED POLICE STATIONS & PATROLS / THROUGHOUT THE / NORTHWEST TERRITORIES, / DURING THE YEAR 1886. / Published by authority of / THE RIGHT HON. SIR JOHN A. MACDONALD, G.C.B. /

COMPILED, DRAWN AND PUBLISHED UNDER THE SUPERINTENDENCE OF J. JOHNSTON, CHIEF DRAFTSMAN, DEPARTMENT OF THE INTERIOR /

PHOTO. LITH. BY THE BURLAND LITHO CO., MONTREAL. /

Date: 1886
Size: 67 x 100 cm
Scale: RF [1:905,143]

Map 46

Glenbow Library

The North-West Mounted Police Force was formed in 1873 to maintain order in the Canadian West. A detachment of three hundred men arrived in 1874, and in a remarkably short period, established patrol routes, police outposts, and spurred the development of permanent settlements (i.e. Fort Macleod, Calgary). The North-West Mounted Police took part in treaty negotiations, maintained order inthe railroad camps of the 1880's, married settlers, carried the mail, and generally filled administrative gaps. This map, published by the Department of the Interior in 1886, shows the vital communication system then in use. Prairie trails criss-cross the area, linking otherwise isolated settlements. Mounted Police patrol routes appear in white. North-West Mounted Police stations, Indian reservations, and administrative districts are plotted, giving a good overview of development up to this period.

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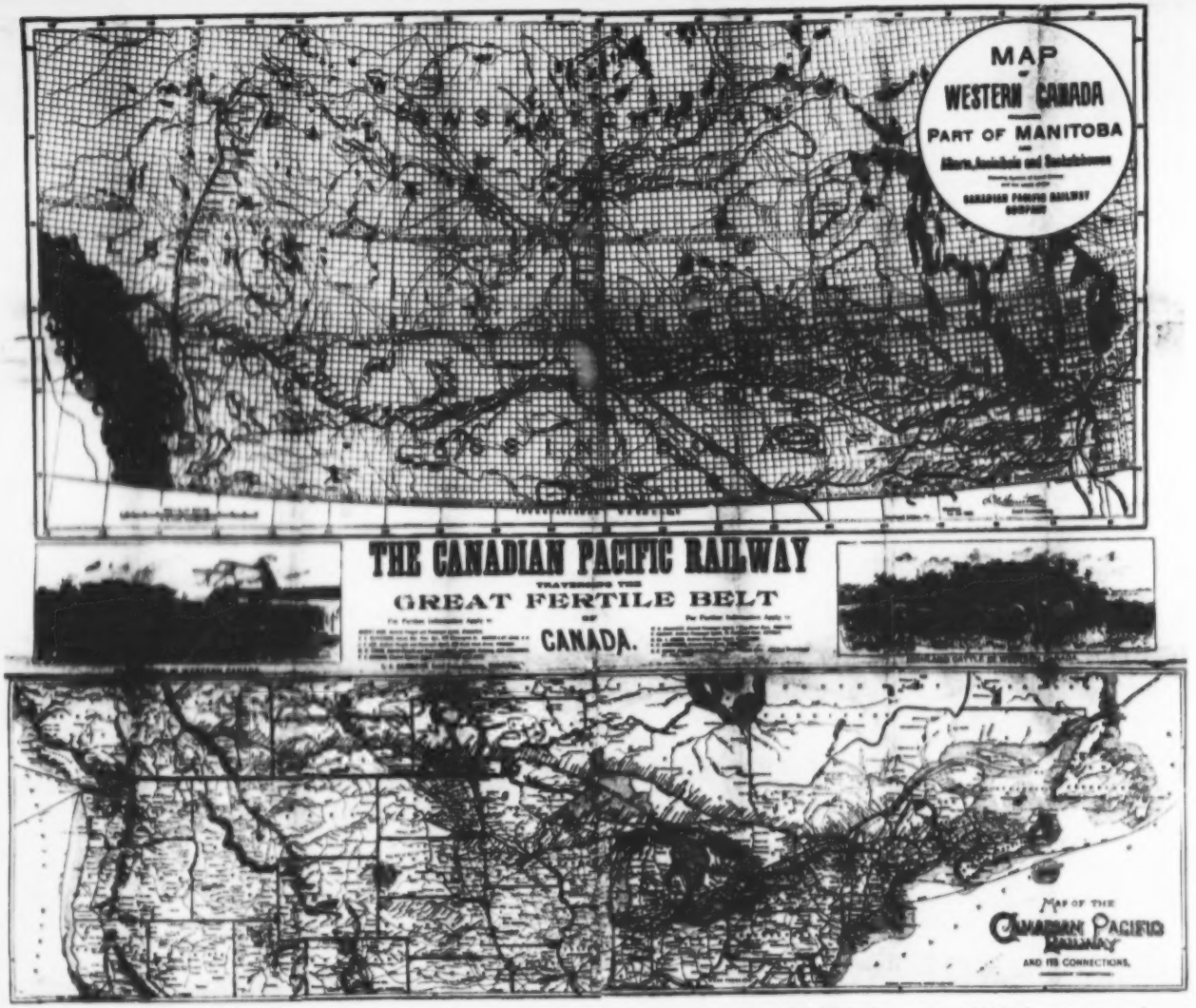

THE CANADIAN PACIFIC RAILWAY / TRAVERSING THE / GREAT FERTILE BELT / OF / CANADA.

Date: 1890
Size: 70 x 82 cm
Scale: Scales vary

Map 47
Glenbow Library

When the Hudson's Bay Company sold most of its interests to Canada in 1869, vast stretches of fertile land were opened to settlement. Construction of the Canadian Pacific Railway made the territory accessible and population increased. As most goods and supplies were moved by rail, expanding settlement was encouraged by the Canadian Pacific Railway. Early companies realized the commercial potential of maps and many were incorporated into advertising material. This sheet was published to attract settlement to the west and includes two maps divided by a list of addresses. The country is described in glowing terms and idealized scenes are also included. The reverse side gives information about weather, farming and topography. The layout is a good example of late-Victorian clutter as information has been added indiscriminately with little attention to design.

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Map 48

CPR Library

MAP OF THE / CANADIAN PACIFIC RAILWAY. / THE MINNEAPOLIS, ST PAUL AND SAULT STE MARIE RAILWAY. / THE DULUTH, SOUTH SHORE AND ATLANTIC RAILWAY. / INDICATING WHERE THE DIFFERENT CLASSES OF SPORT ARE TO BE OBTAINED /

Copyrighted 1893 by Poole Bros. Chicago

POOLE BROS., ENGRAVERS, CHICAGO.

Date:	1893
Size:	46 x 78 cm
Scale:	RF [1:6,000,000]

This map, like the previous one, was published to encourage interest in the lands opened by the Canadian Pacific Railway. Early in its operations the CPR recognized the value of tourism and published this map containing sporting information in 1893. Canadian distribution of various animals is given and only the CPR or lines connected to this system appear. Representation in the United States is extremely detailed but includes no rail systems. Such discrepancies suggest that a previous map has been reissued with the necessary information overprinted. As the original title appeared in a panel rather than over the face of the map, substitution of new title information was possible. Mountains to the forty-ninth parallel are indicated by hachures and time zone divisions appear across the bottom of the map. Standard time was invented by Sir Sandford Fleming to alleviate difficulties with train schedules and received international acceptance at the International Prime Meridian Conference in 1884.

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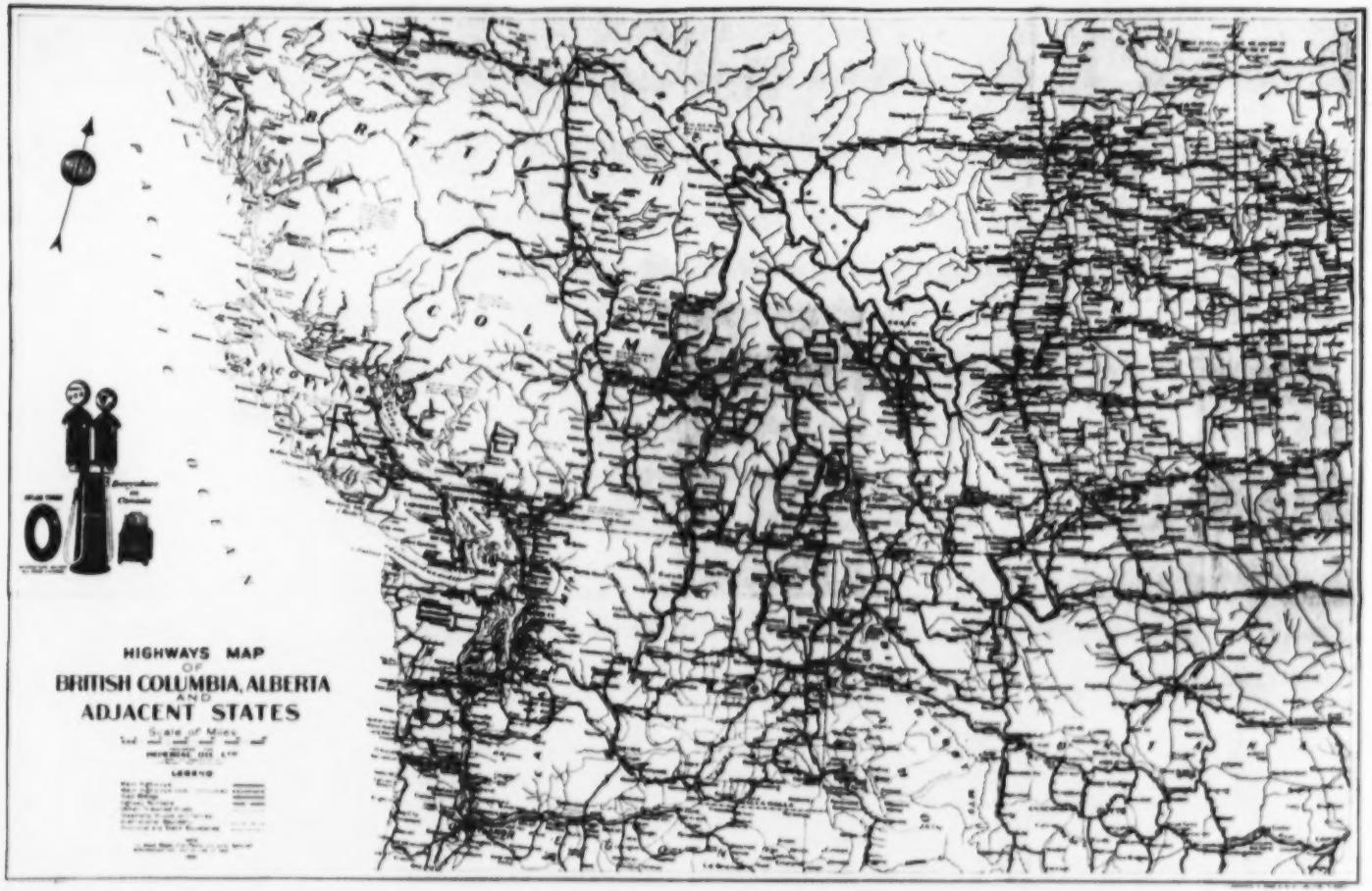

HIGHWAYS MAP / OF / BRITISH COLUMBIA, ALBERTA / AND/ADJACENT STATES / PREPARED FOR / IMPERIAL OIL L^TD / *Under the supervision of / A.R. Thomson, Chief Geographer.* /

COPYRIGHT, 1933 BY IMPERIAL OIL, L^TD /

LITHOGRAPHED IN CANADA BY ROLPH CLARK STONE L^TD. TORONTO /

Date: 1933
Size: 56 x 87 cm
Scale: RF [1:1,900,000]

Map 49
Glenbow Library

Road maps are perhaps more familiar than any other type of map. Because they are readily available and contain current road information, they are often the first maps people use. Major oil companies began free distribution of road maps in 1919 and the first road map of Alberta appeared in 1924. This map, published by Imperial Oil, shows the developing network of roads in the west and includes information about places of interest, reflecting the growing use of the automobile for pleasure as well as transportation. On the reverse side of the map, numerous city plans are given. Town plans have a long history, dating back to medieval times. On general maps, cities were often represented in profile but city atlases used a bird's-eye perspective to indicate shape and layout. Landmarks were eventually stylized and on later maps, the standardized symbols were used to convey information.

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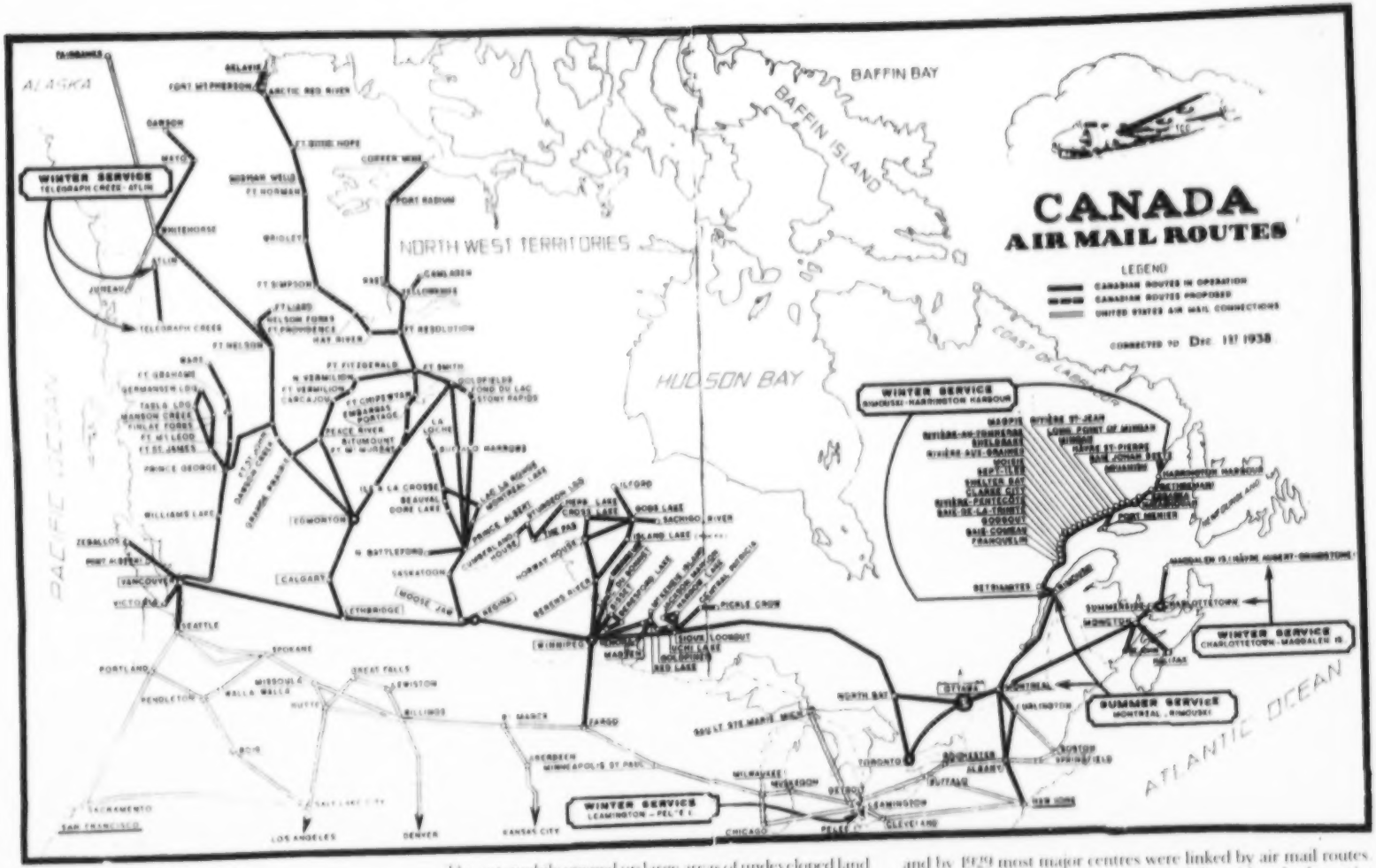

CANADA - AIR MAIL ROUTES
CORRECTED TO DEC 1ST 1938

Date 1938
Size 76 x 157 cm

The automobile opened up large areas of undeveloped land as it reduced dependence upon the railway for supplies. Commercial air travel accelerated this development, replacing ground with air transportation. The airplane alleviated the pressures of time and distance which had previously hampered explorers and settlers. Undeveloped areas could be reached and isolated communities linked. Official air mail service in Canada began in 1927 and by 1929 most major centres were linked by air mail routes. This map shows winter air mail schedules with only the major Canadian cities and their inter-connecting air routes marked. The map bears no imprint except the title and no indication of cartographer, printer or publisher. It introduces, however, the age of flight which still plays an important role in the continuing development of the Canadian west.

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